compliance with the maximum achievable control technology (MACT) requirements of part 63, subpart EEE, of this chapter by conducting a comprehensive performance test and submitting to the Administrator a Notification of Compliance under §§ 63.1207(j) and 63.1210(d) of this chapter documenting compliance with the requirements of part 63, subpart EEE, of this chapter. * * *

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(3) The particulate matter standard of § 264.343(c) remains in effect for incinerators that elect to comply with the alternative to the particulate matter standard under §§ 63.1206(b)(14) and 63.1219(e) of this chapter.

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## PART 266—STANDARDS FOR THE MANAGEMENT OF SPECIFIC HAZARDOUS WASTES AND SPECIFIC TYPES OF HAZARDOUS WASTE MANAGEMENT FACILITIES

■ 15. The authority citation for part 266 continues to read as follows:

**Authority:** 42 U.S.C. 1006, 2002(a), 3001–3009, 3014, 6905, 6906, 6912, 6921, 6922, 6924–6927, 6934, and 6937.

### § 266.100 [Amended]

■ 16. Section 266.100 is amended by redesignating the second paragraph (b)(3)(ii) as (b)(3)(iii).

[FR Doc. E8–6667 Filed 4–7–08; 8:45 am]

**BILLING CODE 6560–50–P**

## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

### 50 CFR Part 223

**[Docket No. 071030628–8482–02]**

**RIN 0648–AV84**

## Endangered and Threatened Wildlife; Sea Turtle Conservation

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** NMFS issues this final rule to clarify the existing sea turtle conservation requirements for sea scallop dredge vessels entering waters south of 41°9.0′ N. latitude from May 1 through November 30 each year and to add a transiting provision to the requirements. Any vessel with a sea scallop dredge and required to have a Federal Atlantic sea scallop fishery permit, regardless of dredge size or vessel permit category, that enters waters south of 41°9.0′ N. latitude, from the shoreline to the outer boundary of the Exclusive Economic Zone (EEZ) must have a chain mat on each dredge, unless the terms of the transiting provision are met. The chain-mat modified dredge is necessary to help reduce mortality and injury to endangered and threatened sea turtles in scallop dredge gear and to conserve sea turtles listed under the Endangered Species Act (ESA). This current action addresses a procedural error in the original rulemaking to require chain mats on scallop dredge gear, clarifies the existing requirements, and adds a transiting provision to the regulations. Any incidental take of threatened sea turtles in sea scallop dredge gear in compliance with this gear modification requirement and all other applicable requirements will be exempted from the ESA's take prohibition.

**DATES:** Effective May 8, 2008.

**ADDRESSES:** Copies of the Environmental Assessment (EA) and Regulatory Impact Review/Final Regulatory Flexibility Analysis (RIR/FRFA) prepared for this final rule may be obtained by writing to Ellen Keane, NMFS, Northeast Region, One Blackburn Drive, Gloucester, MA 01930.

**FOR FURTHER INFORMATION CONTACT:** Ellen Keane (ph. 978–281–9300 x6526, fax 978–281–9394, e-mail *ellen.keane@noaa.gov*) or Barbara Schroeder (ph. 301–713–2322, fax 301–427–2522, e-mail *barbara.schroeder@noaa.gov*).

**SUPPLEMENTARY INFORMATION:**

### Background

All sea turtles that occur in U.S. waters are listed as either endangered or threatened under the Endangered Species Act of 1973 (ESA). The Kemp's ridley (*Lepidochelys kempii*), leatherback (*Dermochelys coriacea*), and hawksbill (*Eretmochelys imbricata*) sea turtles are listed as endangered. The loggerhead (*Caretta caretta*) and green (*Chelonia mydas*) sea turtles are listed as threatened, except for breeding populations of green turtles in Florida and on the Pacific coast of Mexico that are listed as endangered. Due to the inability to distinguish between these populations of green turtles away from the nesting beach, NMFS considers green sea turtles endangered wherever they occur in U.S. waters. Kemp's ridley, hawksbill, loggerhead, and green sea turtles are hard-shelled sea turtles. The incidental take, both lethal and non-lethal, of loggerhead, Kemp's ridley, and unidentified hard-shelled sea turtles has been documented in the sea scallop dredge fishery, as well as a non-lethal take of a green sea turtle (NEFSC FSB, Observer Database). In addition, an unconfirmed take of a leatherback sea turtle was reported during the experimental fishery to test the chain-mat modified dredge gear (DuPaul *et al.*, 2004).

This action is being taken under the ESA provisions authorizing the issuance of regulations to conserve threatened species and for enforcement purposes (sections 4(d) and 11(f), respectively). The requirement to use chain-mat modified dredge gear is necessary to provide for the conservation of threatened loggerhead sea turtles, and will have ancillary benefits for other sea turtle species that have been taken in the sea scallop dredge fishery, albeit to a lesser extent than loggerheads. Under the ESA and its implementing regulations, taking endangered sea turtles—even incidentally—is prohibited. The incidental take of endangered species may only legally be exempted by an incidental take statement (ITS) or an incidental take permit issued pursuant to section 7 or 10 the ESA, respectively. Existing sea turtle conservation regulations at 50 CFR 223.206(d) exempt fishing activities and scientific research from the prohibition on takes of threatened species under certain conditions. Any incidental take of threatened loggerhead sea turtles in sea scallop dredge gear in compliance with this gear modification requirement and other applicable requirements is exempted from the prohibition against takes.

The chain-mat modified dredge is expected to benefit sea turtles following an interaction in the water column. Based on the available information, NMFS has determined that the use of a chain-mat modified dredge will prevent most captures of sea turtles in the dredge bag as well as any ensuing injuries as a result of such capture (e.g., crushing in the dredge bag, crushing on deck, etc.). However, NMFS has made the conservative assumption that a turtle in a bottom interaction sustains significant injuries on the bottom, so, under this conservative assumption, there would not be a benefit from the chain mat for bottom interactions. This assumption, however, may be too conservative in that it is possible (although not likely) that turtles in a bottom interaction only receive minor injuries. In the unlikely scenario of a turtle receiving only minor injuries following a bottom interaction, the chain mat modification would prevent significant injuries that result from capture in the dredge bag (i.e, injuries

from debris in the bag, drowning from forced submergence, dropping on deck, or crushing by the dredge). Additional information on the background, affected environment, and environmental consequences of this action is included in the preamble to the proposed rule (72 FR 63537, November 9, 2007) and in the Final Environmental Assessment (EA) for this aciton.

This final rule will (1) clarify the requirements related to the use of chain mats in the Atlantic sea scallop dredge fishery, (2) add a transiting provision, and (3) address a procedural error in the August 2006 rulemaking (71 FR 50361, August 25, 2006) that required the use of chain-mat modified dredges in the Atlantic sea scallop fishery.

Specifically, this action requires any vessel with a sea scallop dredge and required to have a Federal Atlantic sea scallop fishery permit, regardless of dredge size or vessel permit category, that enters waters south of 41° 9.0′ N. latitude from the shoreline to the outer boundary of the EEZ, to modify their dredge(s) with a chain mat. The chain mat must be composed of horizontal and vertical chains configured such that the openings formed by the intersecting chains have no more than four sides. The length of each side of the openings created by the intersecting chains, including the sweep, must be less than or equal to 14 inches (35.5 cm). Any vessel that enters the waters described above and that is required to have a Federal Atlantic sea scallop fishery permit must have the chain mat configuration installed on all dredges for the duration of the trip, unless it meets the terms of the transiting provision. Vessels may transit through the regulated area provided that the dredge gear is stowed and there are no scallops on board. These requirements are in place from May 1 though November 30 each year.

**New Information**

Since the requirement for the chain-mat modified gear became effective in the fall of 2006, there have been five takes of sea turtles in the scallop dredge fishery. Four of the takes, all loggerhead sea turtles, occurred south of the current northern boundary of the chain mat regulation, while one take, a Kemp's ridley sea turtle, was documented north of this line. Of the four takes south of the line, one of the turtles was observed on top of the dredge frame, swimming away before the dredge came on deck; two were observed in the dredge bag; and one turtle was reported between the chain mat and the dredge. These takes occurred in June (1), August (1), September (2), and October (2). While information on the incidental take that occurred in June was available for the proposed rule, the data on the remaining takes were considered preliminary at that time. Detailed information on these takes and the implications these takes may have regarding the chain-mat modified gear are discussed in the response to Comment 1.

**Comments and Responses**

On November 9, 2007, NMFS published a proposed rule to clarify the requirements regarding chain-mat modified dredges in the Atlantic sea scallop fishery and to add a transiting provision to these requirements (72 FR 63537, November 9, 2007). Comments on this proposed action were requested through December 10, 2007. Six comment letters from individuals or organizations were received during the public comment period. Two commenters were generally supportive of the action but provided comments on particular aspects of the proposed rule, three commenters were opposed to the proposed action, and one provided neither support nor opposition to the proposed action. A complete summary of the comments and NMFS( responses, grouped according to general subject matter in no particular order, is provided here. In their comment letter on the proposed rule, Oceana incorporated comments submitted previously on the Biological Opinion for the Atlantic sea scallop fishery and on the August 2006 chain mat regulation. Those comments included in the submission and relevant to this action will be addressed in the comment/response section below. This submission also included comments that are not relevant to this particular action. These include comments on the original rulemaking related to the economic analysis for the seasonal closure (a non-preferred alternative), other comments on alternatives not considered in this action, and reinititation of consultation based on a letter dated March 13, 2005 received from Dr. Heppell addressing the December 2005 Biological Opinion and a statement on cumulative effects included in the Draft EA (NMFS 2006a) for that action. These comments are addressed in the August 2006 final rule (71 FR 50361, August 25, 2006). Additional comments not relevant to this action are related to the jeopardy analysis included in the Biological Opinion, and the model used for the analysis, and turtle excluder devices for the sea scallop trawl fishery.

*Comment 1:* The purported benefit of chain mats was that, even though most sea turtles are probably severely injured or killed as a result of seafloor collisions, some small number that collide with dredges in the water column are saved because they are prevented from entering the dredge bag. This benefit may be illusory since five turtles were observed captured in 2007, a large number given the low levels of observer coverage in the fishery.

*Response:* Since the requirement for the chain-mat modified gear became effective, the Northeast Fisheries Science Center (NEFSC) Fisheries Sampling Branch (FSB) has documented five takes of sea turtles in the scallop dredge fishery. These takes occurred in June (1), August (1), September (2), and October (2). Four of the takes, all loggerhead sea turtles, occurred south of the 41°9.0′ N. latitude line (the northern boundary of the regulation); while one take, a Kemp's ridley (fresh dead), was documented north of this line. Chain mats were not required, nor were they used, on the trip that occurred north of 41°9.0′ N. latitude. Of the four takes south of the line, one of the turtles was reported by the crew on top of the dredge frame; two were reported in the dredge bag; and one was reported by the captain on the outside of the chains, between the chains and the dredge. All four of the turtles were alive and the observers' comments indicated that the turtles were injured (NEFSC, FSB, Observer Database).

One of the turtles was reported on the top of the dredge frame, possibly held by water pressure. This turtle swam away before the gear was hauled above the waterline. Sea turtles have been documented on the dredge frame previously and have swum away as the gear nears/reaches the surface, indicating that the turtle may have been held by water pressure. NMFS has no indication that this type of interaction would result in significant injury. The chain mat gear is designed to prevent sea turtles from being captured in the dredge bag, not to prevent this type of interaction, which can occur regardless of whether a chain mat is used.

One turtle was reported by the vessel captain to be on the outside of the chain mat, caught between the dredge and the chains. However, it is unclear exactly how and where the turtle was caught/hung up on the dredge frame and/or the chains. The observer did not see the turtle until it was brought on-board. The captain reported that the turtle hit between the dredge and the vessel and then again while lowering the gear to deck. This type of interaction could result in injuries that occur during hauling and emptying of the gear. In 2005 and 2006, NMFS worked with

industry to test a dredge with a modified frame designed to guide sea turtles up and over the dredge frame (see response to Comment 3). The video work conducted during this project did show that sea turtles may become caught on the chains following an interaction on the bottom. However, this likely follows the turtle being struck by the dredge, during which it is likely to have become injured. It is not known whether the interaction in 2007 occurred in the water column or on the bottom. From the available information, it is not known whether the chain mat contributed to the take or the nature of the injuries sustained by the turtle. NMFS is not aware of any other interactions of this nature and it is possible that this is a unique event. NMFS will continue to monitor the sea scallop dredge fishery to determine whether this is indeed a unique event.

The chain-mat modified gear is expected to prevent most sea turtles from entering the dredge bag and injuries that result from such capture. However, two turtles were documented in the dredge bag by the NEFSC FSB in 2007. NMFS investigated whether this may mean that the gear was not functioning as expected and as described in the proposed rule for this action. For one of the interactions resulting in capture in the dredge bag, the openings in the chain mat were measured by the observer at the start of the trip and following the take. After the tow in which the turtle was observed, some openings in the chain mat, particularly at the top of the bag and near the sweep, measured from 16 to 20 inches (40.6–50.8 cm). The turtle captured on this trip measured 65.2 cm (25.7 inches) curved carapace length from notch to tip and 61.5 cm (24.2 inches) curved carapace width (NEFSC, FSB, Observer database). Using the formulas in Teas (1993) and Coles (1999), respectively, this is a straight carapace length of 60.4 cm (23.8 inches) and a straight carapace width of 50.2 cm (19.8 inches). Given the larger openings recorded in the chain mat, a sea turtle of the size observed captured would be small enough to pass through the observed openings.

The second turtle reported captured in the dredge bag measured 89 cm (35.0 inches) from notch to tip and 83 cm (32.7 inches) curved carapace width (NEFSC, FSB, Observer database). Using the formulas in Teas (1993) and Coles (1999), respectively, this is a straight carapace length of 82.9 cm (32.6 inches) and a straight carapace width of 66.2 cm (26.1 inches). No measurements were taken of the openings in the chain mat. However, the observer's comments indicate that there were breaks in, or problems with, the chain mat that allowed the turtle to be captured in the bag. There were several comments in the observer's log about chains/shackles being broken, but none specifically on the tow in which the turtle was taken. On tows prior to the one on which the turtle was taken, there were several instances of large (500 pound (227 kg) and 800 pounds (363 kg)) rocks being caught inside the dredge. The rocks were larger than the turtle that was taken, and too large to fit through a chain mat that was operating correctly. The observer also stated that the horizontal chain closest to the cutting bar may not have been attached to the vertical chain, so the grid was not fixed, which would allow for larger openings (memo from Pasquale Scida to The File, March 11, 2008). For both interactions that resulted in the capture of the sea turtle in the dredge bag, the observers' comments indicate that there were openings in the gear larger than the openings required, allowing the sea turtles to pass into the dredge bag.

This information shows that non-compliant chan mats may result in failure to achieve the intended conservation benefits. However, it does not indicate that the gear, when properly implemented, does not function as expected. NMFS believes that when the gear is properly implemented, it will prevent most sea turtles from being captured in the dredge bag. NMFS is developing a plan to collect information on and to monitor the degree/frequency of stretch and breakage that is occurring in order to better understand the impacts of the wear of the gear. NMFS will also continue to use observer data to gain a better understanding of how sea turtles may be interacting with other parts of the dredge gear (i.e., outside of the dredge bag).

The observer coverage in the Atlantic sea scallop dredge fishery in 2007 is comparable to that over the preceding 5 years (memo from Ellen Keane to The File, February 27, 2007). The number of observed hauls May 1 through November 30 in waters south of 41°9.0′ N. latitude was 4617 in 2002, 5877 in 2003, 10609 in 2004, 7601 in 2005, and 5176 in 2006. From May 1 through October 31, 2007, 8317 hauls were observed. Data on the number of hauls observed in November 2007 is not yet available, but will increase the total number of observed hauls in 2007. The number of hauls observed in 2007 is greater than all but one of the preceding 5 years.

*Comment 2:* Two comments addressed the spatial extent of the proposed rule. One supported using a longitudinal line at 70° W. longitude (long.) as the boundary of the rule as, according to the comment, this is the area in which the gear was tested and is far northward of the area where takes are likely to occur, or where they have occurred with rare exceptions. A second commenter supported the action and the northern boundary as proposed, but noted that the boundary needs to be monitored closely for any changes in the distribution of sea turtles or sea scallops, and therefore, fishing effort, due to environmental change.

*Response:* Sea turtle species that are found off the northeastern coast of the United States north of Cape Hatteras, North Carolina are, in order of frequency of occurrence, loggerhead, leatherback, Kemp's ridley, and green sea turtles (Shoop, 1980; Shoop and Kenney, 1992). The distributions of all four species overlap in part with the distribution of scallop dredge gear. Loggerhead, leatherback, Kemp's ridley, and green sea turtles occur seasonally in southern New England and mid-Atlantic continental shelf waters north of Hatteras. The occurrence of these species in these waters is temperature dependent (Keinath *et al.*, 1987; Shoop and Kenney, 1992; Musick and Limpus, 1997; Morreale and Standora, 1998; Braun-McNeill and Epperly, 2002; James *et al.*, 2005b; Morreale and Standora, 2005). In general, turtles move up the coast from southern wintering areas as water temperatures warm in the spring. The trend is reversed in the fall as water temperatures cool. By December, turtles have passed Cape Hatteras, returning to more southern waters for the winter (Keinath *et al.*, 1987; Shoop and Kenney, 1992; Musick and Limpus, 1997; Morreale and Standora, 1998; Braun-McNeill and Epperly, 2002; James *et al.*, 2005b; Morreale and Standora, 2005). Hard-shelled species are typically observed as far north as Cape Cod whereas more cold-tolerant leatherbacks are observed in more northern Gulf of Maine waters in the summer and fall (Shoop and Kenney, 1992; STSSN database). Extensive survey effort on the continental shelf from Cape Hatteras, North Carolina to Nova Scotia, Canada in the 1980s (CeTAP, 1982) revealed that loggerheads were observed in waters from the beach to depths of up to 4481 m (14,701 ft). However, they were, in general, more commonly found in waters from 22–49 m (72.2–160.8 ft) deep (Shoop and Kenney, 1992). The overall depth range of leatherback sightings in the CeTAP study (1982) was comparable to loggerheads.

Leatherbacks were sighted in water depths ranging from 1–4151 m (3.3–13,619 ft) (Shoop and Kenney, 1992). However, leatherback depth distribution was broader than that of loggerheads with 84.4 percent of the sightings in waters less than 180 m (590.6 ft) (Shoop and Kenney, 1992). By comparison, 84.5 percent of loggerhead sightings were in waters less than 80 m (262.5 ft) (Shoop and Kenney, 1992). The CeTAP study did not include Kemp's ridley and green turtle sightings given the difficulty of sighting these smaller species.

Sixty-five turtles have been observed taken in the sea scallop dredge fishery from 1996 through December 2007. An additional 16 turtles were reported captured on an off-watch or unobserved haul. Prior to 2005, no sea turtle takes had been observed in the sea scallop dredge fishery outside the mid-Atlantic region. In the 1999 and 2000 scallop fishing years, relatively high levels of observer coverage (22 percent–51 percent) occurred in portions of the Georges Bank Multispecies Closed Areas that were conditionally opened to scallop fishing (memo from M. Sissenwine to P. Howard, November 1, 2000). Despite this high level of observer coverage and operation of scallop dredge vessels in the area during June–October, no sea turtles were observed captured in scallop dredge gear in these years. From 2001 through 2004, observer coverage was low in the Gulf of Maine (<1 percent in 2001, 2002, and 2004) and Georges Bank regions (<1 percent in 2001, 2002, and 2003; <2 percent from September through November 2004, with most of the coverage occurring in November) (Murray, 2004a, 2005).

Two takes have been documented in the sea scallop dredge fishery on Georges Bank. In August 2005, a Kemp's ridley sea turtle was taken at approximately 40° 58′ N. lat./67° 16′ W. long., just south of the northern boundary of the chain-mat requirements, by a dredge vessel operating on the southern portion of Georges Bank demonstrating that takes in this area are possible. In 2007, a second Kemp's ridley was taken on Georges Bank at approximately 41° 24′ N. lat./68° 30′ W., just north of the northern boundary of the requirements.

The NEFSC FSB has documented interactions between sea turtles and other commercial fisheries operating in the Georges Bank region. NMFS examined the observer database for sea turtle-fishery interactions in statistical areas 521, 522, 525, 526, 561, and 562. These areas overlap Georges Bank and are east of 70° W. long. From 1989 through 2006, the NEFSC FSB documented 166 sea turtles (excluding moderately and severely decomposed turtles) taken in these areas (memo from John Boreman to Patricia A. Kurkul, March 16, 2006). Of these, only one interaction was documented north of 41°9.0′ N lat. It should be noted that these numbers include all of the turtle data contained in the NEFSC observer database, even though fisheries and turtle bycatch information in the early years is not necessarily reflective of current conditions, nor necessarily analyzed by the NEFSC (such as pelagic longline data) (memo from John Boreman to Patricia A. Kurkul, March 16, 2006). These data show that sea turtles are present on the southern portion of Georges Bank and would be vulnerable to capture by sea scallop dredge gear operating in this area.

As described in the Final EA, the variables associated with sea turtle bycatch in the sea scallop dredge gear are inconclusive (Murray 2004a, 2004b, 2005). Sea surface temperature (SST), depth, time-of-day, and tow time were identified as variables affecting observed bycatch rates of sea turtles with scallop dredge gear (Murray, 2004a, 2004b, 2005). However, the variable(s) associated with the highest bycatch rates changed from one year to another (e.g., SST, depth) or could not be further analyzed (e.g., time-of-day and tow time) because the information is not collected for the entire fishery (Murray, 2004a, 2004b, 2005). Therefore, a single variable has not yet been found for forecasting sea turtle bycatch in sea scallop dredge gear. Intense biological activity is usually associated with oceanographic fronts because they are areas where water masses of different densities converge (Robinson and Hamner; *www.mbari.org/muse/Participants/Robinson-Hamner.html* posted February 18, 2004). A review of the data associated with the 11 sea turtles captured by the scallop dredge fishery in 2001 concluded that the turtles appeared to have been near the shelf/slope front (memo from David Mountain to Cheryl Ryder and Paul Rago, March 22, 2002). Such oceanographic features occurring in the same area as the operation of scallop dredge gear may increase the risk of interactions between scallop dredge gear and sea turtles.

While these geographic and oceanographic factors may increase the risk of sea turtle interactions with scallop gear, evidence for these is presently lacking. Interactions of sea turtles with scallop dredge gear are likely where sea turtle distribution overlaps with the fishery. Based on the known distribution of sea turtles and the observed take of sea turtles in fisheries operating on Georges Bank, NMFS expects the take of sea turtles by dredge vessels operating north of 41°9.0′ N. lat. to be rare. However, it is known that sea turtles are present on southern Georges Bank and may be vulnerable to capture in sea scallop dredge gear operating in this area. Therefore, based on: (1) the known distribution of sea turtles, (2) sea scallop dredge fishing effort, and (3) the observed take of sea turtles, this rule maintains the eastern boundary at the EEZ and the northern boundary at 41°9.0′ N. lat. NMFS will continue to evaluate new information as it becomes available and continue to assess the appropriateness of these boundaries. This action does not preclude NMFS from modifying these boundaries at a future time.

*Comment 3:* One commenter supported the changes to the chain mat requirement but noted that the changes do not address the operation of the dredge on the bottom and that further efforts, such as modifications to the dredge design, are needed. NMFS has expended major effort addressing sea turtle interactions with ''dredge trawls'', but has paid insufficient attention to the dredges themselves where turtles can get lodged in the gear and run over by the dredge. The commenter urges NMFS to increase funding and research to determine the extent of interactions and address them as soon as possible.

*Response:* NMFS continues to be concerned about sea turtle takes in the scallop fishery and is working to minimize them. The chain-mat modification has been shown to reduce the capture of sea turtles in the scallop dredge bag and injuries resulting from such capture. As described in the response to Comment 24, it is likely that sea turtles interact with sea scallop dredge gear on the sea floor and in the water column. However, it is not known what proportion of sea turtles interact with the gear on the sea floor or the water column. NMFS believes the chain mat will prevent serious injury leading to death or failure to reproduce caused by crushing from debris in the dredge bag, dumping of turtles on the vessel's deck, and crushing them by the falling gear. NMFS recognizes that interactions may still occur on the sea floor and may result in serious injury or mortality. Therefore, NMFS is continuing to work to address this type of interaction.

In 2005 and 2006, NMFS worked with industry to test a dredge with a modified cutting bar and bail designed to minimize impacts to turtles that may be encountered on the bottom by guiding the sea turtle over the dredge frame (NMFS, 2005; Milliken *et al.*,

2007). The project used turtle carcasses and model turtles to simulate a worst case scenario of a dredge overtaking a sea turtle lying on the bottom. During the 2005 study, the turtle carcasses were observed lodged in front of the cutting bar and pushed along, eventually going under the cutting bar and getting caught on the chain mat. The model turtle was deployed on one tow with the modified dredge in 2005. During this tow, the model turtle was deflected over the bail of the modified dredge (NMFS, 2005). Based on the results of the 2005 study, the dredge was further modified and additional trials were conducted in 2006. In 8 of the 12 successful trials, the carcasses went over the dredge (n=7) or were deflected to the side (n=1), indicating that the design may be effective in guiding turtles up and over the dredge (Milliken *et al.*, 2007). It is important to note that the project was limited in that behavioral responses of a live turtle encountering a dredge could not be assessed. The results of these studies indicate that this modification may be effective at guiding sea turtles up and over the dredge frame. NMFS is continuing to test this modification to assess whether it will be effective in reducing the severity of injuries to sea turtles interacting with sea scallop dredges on the bottom.

In addition, research using video has been conducted to better understand the nature of the interactions. Three recent projects have used video to try to document sea turtle behavior and interactions with sea scallop dredges. In addition to the work conducted in 2005 and 2006 on the modified dredge frame, researchers used video during the 2003–2004 study of the chain-mat modified dredge. During this study, one trip was designated as a research camera cruise where underwater video was taken of the modified dredge during normal fishing operations (DuPaul *et al.*, 2004). Video was also used on two other cruises. No sea turtles were documented by video on the three cruises that utilized cameras (R. Smolowitz, pers. comm.).

In 2004 and 2005, the NEFSC also worked with researchers and commercial fishermen to conduct approximately 80 hours of videotaping of dredges as they are fished. These studies were designed to observe sea turtle behavior around sea scallop dredge gear. In 2004, 7 hours of video was taken on a 3-day trip. During this project, video techniques and tools were developed to document the behavior of sea turtles. However, no sea turtles were recorded (Smolowitz *et al.*, 2005). In 2005, video was collected over 2 trips, one in August and one in September (Smolowitz and Weeks, 2006). Approximately 80 hours of video were collected during these trips. This video has been reviewed and no sea turtles were documented (Smolowitz and Weeks, 2006).

It is evident from these studies that using video to document the specific nature of sea turtle-sea scallop dredge interactions, in general, and sea turtle-chain mat interactions specifically, is logistically difficult. Despite the challenges associated with using video to document interactions between sea turtles and sea scallop dredges, NMFS plans to continue collecting video in conjunction with other gear projects in an effort to gain a better understanding of interactions between sea scallop dredge gear and sea turtles.

NMFS is also investigating gear modifications to minimize impacts to sea turtles resulting from interactions in the sea scallop trawl fishery. In 2006, the use of a turtle excluder device (TED) in the scallop trawl fishery was investigated (Lawson and DeAlteris, 2006). This research is on-going. NMFS is considering amendments to the regulatory requirements for TEDs, including requiring the use of TEDs in the trawl component of the Atlantic sea scallop fishery (72 FR 7382, February 15, 2007).

*Comment 4:* One commenter believes the solution is to create hatcheries for turtles that release more turtles than have interactions with commercial fishing gear. The hatchery could raise the turtles to two or more years before releasing them.

*Response:* Headstarting is used to describe the process whereby turtles are maintained in captivity for a period following hatching (USFWS and NMFS, 1992). The premise behind headstarting is that sea turtles will be larger and less susceptible to predators upon their release; thus, increasing their chances of survival. Sea turtles have been captive reared in a number of projects, including green sea turtles in Florida (Huff, 1989) and Kemp's ridley sea turtles in Texas (USFWS and NMFS, 1992). Generally, this has been considered experimental as a management technique (NRC, 1990; USFWS and NMFS, 1992) and has been controversial for a number of reasons, including that it is unproven, removes turtles from their natural environment, and does not reduce the threats that cause population declines (NRC, 1990; Shaver and Wibbels, 2007). The effectiveness of headstarting is dependent on the survival, adaptation, and eventual breeding of sea turtles after their release (Shaver and Wibbels, 2007). Some headstarted sea turtles have been documented nesting (Shaver and Calliouet, 1998; Bell *et al.*, 2005; Shaver, 2005). However, data are often limited and it is not clear how many documented nestings are required to indicate success of a program. Although headstarted sea turtles have been shown to successfully nest, it is not known that such a program increases the size of the wild breeding stock of sea turtles.

In addition, it is important to protect in-water populations of sea turtles. Based on the size of Atlantic loggerheads at various life stages and the measurements of sea turtles captured in the sea scallop dredge fishery, NMFS anticipates that both benthic immature and sexually mature loggerhead sea turtles are captured in the fishery (NMFS, 2008). This is a different size class than would be released from the head-starting program. Population model analyses for loggerhead sea turtles indicated survival in the first year was less critical than survival in later life stages (Crouse *et al.*, 1987). Heppel *et al.* (1996) used a series of deterministic matrix models for yellow mud turtles and Kemp's ridley sea turtles to examine the effects of headstarting. This study showed that efforts focusing exclusively on improving survival in the first year of life are unlikely to be effective for long-lived species such as turtles. Across turtle species, analyses of growth rates have consistently shown that these rates depend strongly on survival of turtles nearing or reaching sexual maturity (*i.e.*, large juveniles, sub-adults, and sexually mature animals) (Heppell, 1998). Benthic immature and sexually mature loggerhead sea turtles are the size classes that are impacted by the sea scallop dredge fishery.

*Comment 5:* Several comments were received on the ITS for the Atlantic sea scallop dredge fishery. One commenter states that NMFS has a history of failing to recognize the extent and impact of the scallop dredge fishery's impact on turtles as estimates of take have increased in the 2003 and 2004 Biological Opinions and that the current levels are unacceptably high. In addition, chain mats contribute to underestimates by not bringing sea turtles out of the water, and the failure to lower the ITS in the 2006 Biological Opinion leads them to believe that NMFS does not expect that the take and injury will be significantly reduced with the use of the chain mats. Comments on the original chain-mat rulemaking, and resubmitted with this rulemaking, stated that the proposed rule's estimated take was too low because the 2004 Biological Opinion did not include a number of ways that dredges can take sea turtles

(*i.e.*, being hauled up on top of the gear, being wedged in the forward parts of the dredge frame, being held against the dredge by the pressure of the flow of water, or by being run over by the dredge and chain bag). In addition, one commenter stated that the assumption that sea turtles are interacting with the dredges at the same rate as prior to 2006 is not sound science, as industry has fewer days.

*Response:* The most recent consultation on the continued authorization of the Atlantic sea scallop fishery, conducted under section 7 of the ESA, was completed in March 2008. The Biological Opinion for that consultation provides the consultation history, the past and anticipated future effects of the fishery on ESA-listed species, and measures to be taken by NMFS to address the taking of ESA-listed species in the scallop dredge and trawl fisheries (NMFS, 2008).

For the reasons stated in the background and in the response to comment 24, NMFS believes that the serious injury and mortality rate of sea turtles interacting with chain-mat modified gear will be less than that calculated for the Biological Opinion since fewer turtles will be subject to injuries occurring within the dredge bag or as a result of dumping the bag on deck. However, NMFS cannot quantify the reduction in mortality rate given that the proportion of sea turtles interacting with the dredge in the water column versus on the bottom is not known. For the section 7 consultation on the continued authorization of the scallop fishery, NMFS uses the best available information and provides the benefit of the doubt to the species where information is incomplete. Therefore, since the reduction in the mortality rate cannot be quantified, the anticipated number of lethal sea turtle interactions was not reduced as a result of the implementation of the chain-mat regulations.

The bycatch estimates completed by the NEFSC (Murray 2004a, 2004b, 2005, 2007), and the anticipated take level in the Biological Opinions, included any interaction occurring during an on-watch haul, that was not moderately or severely decomposed upon capture. This includes sea turtles hauled up on top of the gear, wedged in the forward parts of the dredge frame, held against the dredge by the pressure of the flow of water as observed from on deck, or turtles swimming at the surface that were observed ''bumped'' by the cables of the dredge. Sea turtles may interact with the gear and not be brought to the surface. These interactions cannot be quantified at this time.

The number of days available to industry would not change the bycatch rate (number of turtles taken per unit of effort) of sea turtles in the fishery, but would change the total estimated bycatch of sea turtles if the fishing effort has been reduced in areas and at times where turtle occur. NMFS recognizes that recent management measures have/will constrain effort in the mid-Atlantic sea scallop fishery. In Framework 18 to the Scallop FMP, open areas DAS allocations were lower than the 2004 levels (71 FR 2006, June 8, 2006). Amendment 11 to the Scallop FMP proposes to control the capacity of the general category scallop fishery and, if implemented, would limit the number of vessels that can participate in the fishery and the number of scallops that can be retained and landed by vessels in the general category fleet (72 FR 71315, December 17, 2007). As described above, in the section 7 consultation process under the ESA, NMFS uses the best available information and provides the benefit of the doubt to the species where information is incomplete. For the purpose of analyzing the effects of the sea scallop dredge fishery on loggerhead sea turtles, NMFS considers that the bycatch estimates in the 2003 and 2004 fishing years provide the best available information. NMFS believes that the serious injury and mortality rate of sea turtles interacting with chain-mat modified gear will be less than that calculated for the Biological Opinion since fewer turtles will be subject to injuries occurring within the dredge bag or as a result of dumping the bag on deck. However, NMFS cannot quantify the reduction in mortality rate at this time. Refer to the March 2008 Biological Opinion for additional information on the estimate of take in this fishery.

*Comment 6:* Sonar could be utilized to displace sea turtles from the areas where scallopers are working.

*Response:* The information on the hearing capabilities of sea turtles is limited, but suggests that the auditory capabilities are centered in the low-frequency range (<1kHz) (Ridgeway *et al.*, 1969; Lenhardt *et al.*, 1996; Bartol *et al.*, 1999). There is also very little information about sea turtle behavioral reactions to levels of sound below the thresholds suspected to cause injury or Temporary Threshold Shift (Ridgeway *et al.*, 1969; McCauley, 2000). Given the limited information on sea turtle hearing and behavior in response to sound, this type of mitigation is not feasible. The use of sonar could result in injury, affect sea turtle behavior, and displace sea turtles from a preferred habitat including foraging grounds, and would constitute a take under the ESA. The use of sonar could also impact other animals in the area in which it is utilized. Some of these species are protected under the Marine Mammal Protection Act and the ESA.

*Comment 7:* No dredging, trawling, or longlining should be allowed.

*Response:* As described in the response to Comment 2, sea turtle presence varies with season. The capture of sea turtles in sea scallop dredge gear has been documented in the mid-Atlantic from June through October and the potential for takes exists in May and November due to the overlap of the sea scallop dredge fishery with sea turtle distribution. As sea turtle distribution and sea scallop dredge effort are not expected to overlap from December 1 through April 30, banning dredging during these months is not expected to provide benefits to sea turtles. A seasonal closure of the mid-Atlantic was considered during the original rulemaking to require chain-mat modified dredges in the Atlantic sea scallop dredge fishery. This alternative was rejected given the uncertainty of the extent of the area in which interactions occur, the broad extent of the closure, and the potential displacement of effort to other fishing areas. Additional information on this alternative can be found in the August 2006 final rule (71 FR 50361, August 25, 2006) and its accompanying EA (NMFS, 2006). The comments regarding longline and trawl fisheries are not relevant to this action.

*Comment 8:* NMFS should consider additional methodologies to reduce sea turtle interactions with the dredge fleet, such as keeping discards on board during fishing operations as sea turtles may be attracted to the discards.

*Response:* It has been suggested that the discard of scallop viscera during fishing operations may be attracting sea turtles to the fishing area. White (2004) reported loggerhead sea turtles opportunistically feeding on discards from gillnet vessels docked at a quay in Greece and there are anecdotal reports of sea turtles opportunistically feeding on discards in the shrimp trawl fishery. It is unclear whether the turtles were drawn to the vessel because of the discards or just happened to be in the same place as the vessels at the same time. At this time, NMFS has no evidence to refute or support the possibility that discards may be attracting sea turtles to scallop vessels. Sea turtles that may be attracted to discarded viscera might disperse away from fishing vessels if the practice is prohibited. Alternatively, these turtles may remain in the fishing area and feed on natural prey in the benthos. Therefore, it is not clear that a

prohibition on the discard of sea scallop viscera would reduce the risk of interaction.

NMFS is continuing to investigate additional modifications to reduce injury and mortality to sea turtles resulting from an interaction with sea scallop dredge gear. See the response to Comment 3 for additional information.

*Comment 9:* Regulations result in scallop fishing occurring in smaller areas which creates a non-natural food supply congregating sea turtles. Reduce the non-natural food supply by changing the regulations.

*Response:* The distribution of sea scallop fishing effort is a function of the condition of the resource. Vessels fish where the sea scallop catch is most efficient. Certain management measures may amplify this as with more restrictive measures, there is more interest in maximizing the yield compared to the effort. While vessels may fish the same areas, NMFS has no evidence to refute or support the possibility that discards from the sea scallop fishery may be attracting sea turtles to those areas (see response to Comment 8).

*Comment 10:* NMFS could substantially mitigate the impacts of the scallop dredge fishery on sea turtles through narrowly crafted time-area closures. An analysis of potential closure areas was submitted with the comment. Recommended closures include the Elephant Trunk Access Area from June 1 to October 31, the eastern portion of the Hudson Canyon Access Area and the area immediately east from July 1 to October 31, and the Delmarva Area from June to October. Time-area closures must be considered in this rulemaking.

*Response:* During the original rulemaking to require chain-mats in the Atlantic sea scallop dredge fishery, NMFS evaluated a seasonal closure of the mid-Atlantic in order to reduce the impacts on sea turtles from sea scallop dredge activity. However, given the uncertainty of the extent of the area in which interactions occur, the broad extent of the closure, and the potential displacement of effort to other fishing areas, this alternative was rejected at that time (71 FR 50361, August 25, 2006).

Framework 18 to the Scallop FMP implemented a closure of the Elephant Trunk Access Area (ETAA) during September and October to reduce potential interactions between the sea scallop fishery and sea turtles (71 FR 33211, June 8, 2006). On November 8, 2007, the New England Fishery Management Council (Council) submitted Framework 19 to the Scallop FMP to NMFS. In Framework 19, the Council recommends removing the seasonal closure for the ETAA. NMFS has published a proposed rule for Framework 19 that indicates that NMFS would disapprove the Council's recommended closure, thereby leaving the September through October closure in place (73 FR 14748). As there is no new information that justifies eliminating the seasonal closure, and due to concern relating to the potential bycatch of sea turtles if this closure were eliminated, the Council's recommendation to eliminate the ETAA seasonal closure will be disapproved. NMFS would continue to monitor the effectiveness of this closure and adjust management measures as appropriate.

As described in the Final EA, a consistent set of variables has not yet been found for forecasting sea turtle bycatch with sea scallop dredge gear. NMFS is continuing to work towards identifying ''hot spots'' of sea turtle bycatch in the mid-Atlantic. NMFS is currently conducting a study to examine various environmental variables in relation to sea turtle takes in multiple NER fisheries, including the sea scallop fishery. This project integrates data from a suite of satellite sensors, electronic tags, fishery observer logs, and high-resolution coupled physical-biological models to quantitatively characterize sea turtle habitat in a variety of oceanic environments. The end product will be a set of decision support tools that forecast the likelihood of sea turtle-fishery interactions.

*Comment 11:* NMFS should expeditiously issue new and adequate regulations to protect loggerhead sea turtles from sea scallop dredging before scallop dredging begins to take sea turtles in the spring.

*Response:* As described in the proposed rule and the EA for this final action, NMFS believes that the chain-mat modification will protect sea turtles from capture in the dredge bag and will, therefore, protect them from injury and mortality that results from such capture. Therefore, NMFS is issuing this final rule to minimize the impacts that would result from capture in the dredge bag. NMFS recognizes that sea turtles may be struck by the dredge gear as it is fished and that injuries and mortality may result from such an interaction. NMFS will continue to investigate and implement, as appropriate, measures to reduce interactions with sea turtles and/or the severity of interactions that do occur (see comment 3).

*Comment 12:* The reevaluation of the chain mat modification must be undertaken in the context that the south Florida nesting population is in perilous condition. The loggerhead sea turtle is no closer to recovery now than when it was originally listed.

*Response:* A detailed description of the status of the species can be found in the EA for this action, while a summary is provided here. A number of stock assessments (TEWG 1998, 2000; NMFS SEFSC, 2001; Heppell *et al.*, 2003) have examined the stock status of loggerhead sea turtles in the waters of the United States, but have been unable to develop any reliable estimates of absolute population size. Due to the difficulty of conducting comprehensive population surveys away from nesting beaches, nesting beach survey data are used to index the status and trends of loggerhead sea turtles (68 FR 53949, Sept. 15, 2003). There are at least five western Atlantic loggerhead nesting groups. These are the northern, south Florida, Dry Tortugas, Florida Panhandle, and Yucatan nesting groups. Genetic analyses conducted at the nesting sites indicate that they are distinct nesting groups (TEWG, 2000). The 5-year status review for loggerhead sea turtles (NMFS and USFWS, 2007) compiled the available information on mean number of loggerhead nests per year and, where available, the approximated counts of nesting females for each of the five identified nesting groups in the western North Atlantic.

Nesting survey data is important in that it provides information on the relative abundance of nesting, the estimated number of reproductively mature females in each nesting group, and the contribution of each nesting group to loggerhead nesting in the western Atlantic, overall. During the majority of the 1990s, the south Florida nesting group showed an increase in the number of nests of 3.6 percent annually from 1989–1998 (TEWG, 2000). However, in 2006, information was presented at an international sea turtle symposium (Meylan *et al.*, 2006) and in a letter to NMFS (letter to NMFS from the Director, Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission, October 25, 2006) that the south Florida loggerhead nesting group was experiencing a decline in nesting. A trend analysis of the nesting data collected for Florida's Index Nesting Beach Survey program showed a decrease in nesting of 22.3 percent in the annual nest density of surveyed shoreline over the 17-year period and a 39.5-percent decline since 1998 (letter to NMFS from the Director, Fish and Wildlife Research Institute, Florida Fish and Wildlife Conservation Commission, October 25, 2006). Data collected in Florida in 2007 reveal that the decline in nest numbers has

continued as 2007 had the lowest nest count in any year during the period of 1989–2007 (FWRI, 2007). Standardized ground surveys of 11 North Carolina, South Carolina, and Georgia nesting beaches showed a significant declining trend of 1.9 percent annually in loggerhead nesting from 1983–2005 (NMFS and USFWS, 2007). In addition, standardized aerial nesting surveys in South Carolina have shown a significant annual decrease of 3.1 percent from 1980–2002 (NMFS and USFWS, 2007). The South Carolina data represents approximately 59 percent of nesting by the northern nesting group (Dodd, 2003). No surveys of the Dry Tortugas nesting group have been conducted since 2004. No trend was detected in the number of nests laid from 1995 to 2004 (excluding 2002 when surveys were not conducted); however, because of the annual variability in nest totals, a longer time series is needed to detect a trend (NMFS and USFWS, 2007). The Florida Panhandle nesting group has shown a significant declining trend of 6.8 percent annually from 1995–2005 (NMFS and USFWS, 2007). The Yucatan nesting group is characterized as having declined since 2001 (NMFS and USFWS, 2007).

Unlike nesting beach data, in water studies of sea turtles typically sample both sexes and multiple age classes. As is the case with nesting data, there are caveats for using results from in water studies to assess sea turtles abundance and the trend of turtle populations, overall. Nevertheless, these can be useful for gaining information on the species away from the nesting beach. As was described in a 1999 report of the IUCN/SSC Marine Turtle Specialist Group, although sea turtles spend at most 1 percent of their lives in or on nesting beaches, approximately 90 percent of the literature on sea turtle biology is based on nesting beach studies (Bjorndal, 1999). In water studies have been conducted in some areas of the western Atlantic and provide some data by which to assess the relative abundance of loggerhead sea turtles and changes in abundance over time (Maier *et al.*, 2004; Morreale *et al.*, 2004; Mansfield, 2006). Maier *et al.* (2004) used fishery-independent trawl data to establish a regional index of loggerhead abundance for the southeast coast of the United States (Winyah Bay, South Carolina to St. Augustine, FL) during the period 2000–2003. A comparison of loggerhead catch data from this study with historical values suggested that in-water populations of loggerhead sea turtles along the southeastern United States appear to be larger, possibly an order of magnitude higher than they were 25 years ago (Maier *et al.*, 2004). However, reduced catch rates in the smaller size classes was also noted over the four year time period (Maier *et al.*, 2004). A long-term, on-going study of loggerhead abundance in the Indian River Lagoon System of Florida found a significant increase in the relative abundance of loggerheads over the last 4 years of the study, but there was no discernable trend in abundance over the 24-year time period of the study (1982–2006) (Ehrhart *et al.*, 2007). Sea turtles captured in pound nets in the fall and early winter in North Carolina were sampled from 1995–1997 and 2001–2003 to monitor trends in catch rates. The catch rates of loggerhead sea turtles increased significantly at a rate of 13 percent per year during the study period (Epperly *et al.*, 2007). There was also a significant increase in the size of loggerhead sea turtles over time (Epperly *et al.*, 2007).

In contrast to these studies, Morreale *et al.* (2004) observed a decline in the incidental catch of loggerhead sea turtles in pound net gear fished around Long Island, NY during the period 2002–2004 in comparison to the period 1987–1992. No changes in size distribution were noted but only two loggerheads were captured from 2002–2004 and these were comparable in size to the larger turtles captured during the 1987–1992 period (Morreale *et al.*, 2004). Using aerial surveys, Mansfield (2006) also found a decline in the densities of loggerhead sea turtles in Chesapeake Bay over the period 2001–2004 compared to aerial survey data collected in the 1980s. Significantly fewer turtles ($p<0.05$) were observed in both the spring (May–June) and the summer (July–August) of 2001–2004 compared to aerial surveys in the 1980s (Mansfield, 2006). A comparison of median densities from the 1980s to the 2000s suggested that there had been a 63.2 percent reduction in densities during the spring residency period and a 74.9 percent reduction in densities during the summer residency period (Mansfield, 2006).

NMFS is undertaking a number of efforts in order to determine the status of loggerhead sea turtles. In November 2007, NMFS initiated a review of the status of loggerhead sea turtles to determine whether a petitioned action to classify the North Pacific or Pacific loggerhead sea turtles as a Distinct Population Segment (DPS) with endangered status is warranted, and whether any additional changes to the current threatened listing for the loggerhead sea turtle are warranted (72 FR 64585, November 16, 2007). This review is expected to be completed in the summer of 2008. NMFS also received a petition in November 2007 to designate loggerhead sea turtles in the western North Atlantic as a DPS with endangered status and to designate critical habitat for this population. The petition also requested that if the western Atlantic loggerhead sea turtle is not determined to meet the DPS criteria that loggerheads throughout the Atlantic be designated as a DPS and listed as endangered and that critical habitat be designated for it (Petition from Oceana and The Center for Biological Diversity to Carlos M. Gutierrez, Dr. William Hogarth, Dirk Kempthorne, and H. Dale Hall, November 15, 2007). On March 5, 2008, NMFS published a response to the petition (73 FR 11851). NMFS has convened a biological review team to review the status of the species to determine whether the petitioned action is warranted and to determine whether any additional changes to the current listing of the loggerhead turtle are warranted (73 FR 11851, March 5, 2008). The Recovery Plan for loggerhead sea turtles is currently being revised, and NMFS has convened a new loggerhead Turtle Expert Working Group (TEWG) to review all available information on Atlantic loggerheads. The TEWG is continuing to explore several hypotheses as to the decline in nest numbers observed in Florida. A final report from the TEWG is anticipated in 2008.

The information on the decline in the south Florida nesting group is detailed and considered in the EA for this action. This action is expected to mitigate to some extent negative impacts to sea turtles by reducing injury and mortality resulting from capture in the sea scallop dredge bag.

*Comment 13:* Two comments were received regarding reinitiation of consultation under section 7 of the ESA. One commenter stated that NMFS should reinitiate on all major U.S. fisheries interacting with sea turtles given the recent nest numbers for Florida. A second commmenter stated that the new rule should be subject to formal consultation to ensure that the scallop dredge fishery does not jeopardize the continued existence and recovery of the loggerhead sea turtle.

*Response:* As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained and if: (1) The amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that affect listed species or critical habitat in a manner or

to an extent not considered in the previous opinion; (3) the agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat not considered in the previous opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. NMFS determined on November 2, 2007 that this action does not trigger the need to reinitiate consultation (memo from Patricia A. Kurkul to The Record, November 2, 2007).

Although this action does not trigger reinitiation of consultation, NMFS reinitiated ESA section 7 consultation on the Scallop FMP on April 3, 2007 as new information had become available on the take of sea turtles in the sea scallop trawl fishery (Murray, 2007). This consultation (March 2008) considered the effects of the sea scallop fishery as a whole, including the use of chain-mat modified gear. The comments related to reinitiating on other major U.S. fisheries that interact with sea turtles are not relevant to this action.

*Comment 14:* NMFS should consider ways for fishermen, working in conjunction with appropriate veterinary or rescue facilities, to bring injured turtles to these facilities for treatment.

*Response:* Currently, information regarding the transfer of injured turtles to appropriate rehabilitation facilities is included in the fishery observer training packets, including contacts for appropriate/authorized facilities from Maine to North Carolina. Observers are encouraged to make these arrangements for injured sea turtles as logistics and practicality allow, taking into account trip length and ability to transfer turtles quickly and safely. It is generally considered prohibitive if a turtle is taken during a multi-day trip, as a turtle with significant injuries would need to be transferred immediately, all resources to enable the transfer would be voluntary/donated, the receiving facility must be able to accept the case, and must agree to the transfer before a turtle is brought in. Vessels in the limited access fleet generally take extended trips of up to 12–20 days. Often, based on NMFS' experience with trained observers, the transportation of sea turtles to rehabilitation facilities is logistically challenging.

Regulations under 50 CFR 223.206(d) require fishermen who incidentally take turtles to return them to the water immediately (or after resuscitation) and prohibit the landing, offloading, or transhipping of incidentally caught sea turtles. At this time, fishermen should contact NMFS Northeast Regional Office to see if a Sea Turtle Stranding and Salvage Network member would meet the vessel and retrieve the turtle at sea or what other options may be available.

*Comment 15:* The requirement should be that the chain mat be created with ''any material'' to create openings of 14 inches (35.5 cm) or less. The chains are causing vessels to turn the engines harder using more fuel.

*Response:* The experimental fishery to test the modified gear used ⅜ inch hardened steel chain to create the chain mat (DuPaul *et al.*, 2004). This was the modification that was shown to be effective at preventing sea turtles from entering the dredge bag. As far as NMFS is aware, no other materials have been tested. NMFS cannot assume that all other materials would be as effective as chain at preventing sea turtles from entering the gear. Therefore, NMFS is requiring that chain be used over the opening to the dredge bag. The impacts of the chains on the efficiency of the dredge are discussed in the response to Comment 20.

*Comment 16:* Two comments were received on cumulative impacts. One commenter stated that there is a need to expeditiously address the cumulative impacts of U.S. fisheries on sea turtles given the recent nest numbers. The estimate of takes, and the authorized take, in fisheries has been revised upwards in recent year, and as new information becomes available increases in takes can be expected. NMFS must address these cumulative impacts if the decline of Atlantic loggerhead sea turtles is to be arrested. A second commenter stated that NMFS must ensure that the ESA and National Environmental Policy Act (NEPA) analysis considers cumulative impacts on loggerheads, including the threats from global climate change.

*Response:* The response to Comment 12 summaries the information on the recent nest numbers and the status of the species. Cumulative effects, including global climate change, on sea turtles were evaluated in the NEPA analysis for this action and under section 7 consultation on the continued authorization of the fishery. The EA for this action and the most recent Biological Opinion (NMFS 2008) should be referred to for the analysis.

NMFS continues to work to minimize negative impacts to sea turtles. NMFS has implemented measures to reduce fisheries impacts including restrictions on the use of gillnet gear and gear requirements in the Virginia pound net fishery, the pelagic longline fishery, and the shrimp and summer flounder trawl fisheries. As described in the response to Comment 3, NMFS is conducting research on gear modifications to minimize impacts from benthic interactions between sea turtles and sea scallop dredge gear. In addition, NMFS is considering amendments to the regulatory requirements for TEDs in the mid-Atlantic (72 FR 7382, February 15, 2007). NMFS continues to work to identify and address threats to sea turtles.

*Comment 17:* Two commenters stated that the configuration should be defined as a fixed number of chains based on dredge width for ease of compliance and enforcement. In addition, one commenter stated that the regulation can be only enforced by measuring all sides of the squares, the current configuration presents too great a risk of unintentional violations, and is a safety issue. To measure the chain mat at sea, enforcement must either disengage the mats and lay them out, measure a suspended dredge, which is unsafe for all, or disengage the dredge and turn it up. None of these are practicable and all take away from fishing opportunities.

*Response:* NMFS Office of Law Enforcement (OLE) and the United States Coast Guard (USCG) are confident that the regulation is enforceable regardless of whether the requirement is for a specified number of chains or for an opening of less than or equal to 14 inches (35.5 cm). We have discussed the issue of safety with both OLE and the USCG and they have not raised any concerns. Measurements may be taken with the gear on deck if measuring a suspended dredge is determined at the time to present a safety issue. As with any gear modification of this type (i.e., mesh size requirements), it is not necessary that enforcement measure each and every opening, but rather that they measure a subset of openings to determine whether the gear is in compliance.

NMFS recognizes that as the chains stretch and wear (''stretch''), they become longer and the openings may exceed 14 inches (35.5 cm), even if the gear was originally configured to meet the requirement. This may result in fishermen being concerned about unintentional violations resulting from larger openings due to this stretch. The degree of stretch depends on a number of factors including the area in which the vessel is fishing and the type/quality of chain that the vessel uses to configure the gear. NMFS has limited information on the degree of stretch that may occur. For one of the interactions resulting in the capture of a sea turtle in the dredge bag in 2007 (see response to Comment 1), the openings in the chain mat were measured by the observer at the start of the trip and following the take. At the start of the trip, the openings were 12 inches (30.5 cm) to 14 inches (35.5 cm),

but by the tow in which the turtle was observed, some openings in the chain mat, particularly at the top of the bag and near the sweep, measured from 16 to 20 inches. The openings measured at the start of the trip and those measured after the take were not necessarily the same openings (memo from Pasquale Scida to The File, March 11, 2008). That is, the openings which measured 16 inches (40.6 cm) to 20 inches (50.8 cm) inches may have been greater than 12 inches (30.5 cm) to 14 inches (35.5 cm) measured at the start of the trip. This is the only trip on which measurements are available. However, there is anecdotal information from the observer program that indicates the stretch that may have occurred on this trip is not what is normally observed. Observers have noted that all the chains do stretch slightly. However, the stretch on this trip seemed excessive (memo from Pasquale Scida to The File, March 11, 2008). NMFS will continue to work with the observer program to get additional measurements with which to better assess the degree of stretch and to evaluate the implications of the observed stretch. NMFS has advised fishermen that they need to be aware of this stretch and take it into consideration when configuring the gear.

*Comment 18:* The design of the modified gear was driven by the desire to balance the need to protect turtles with an objective and easy to enforce standard and was structured to balance dredge efficiency with the prevention of turtles entering the dredge. There was no expectation of absolute uniformity in the rectangles created. There is no basis for the statement ''As indicated in the final report, the number of chains in and of itself was not what drove the configuration tested. Rather it was the target size of the openings that drove the overall configuration.''

*Response:* According to the final report on the experimental fishery, the design criteria that were used in developing the chain mat were to: (1) Prevent turtles of greater than 24 inches (60.7 cm) from entering the dredge bag (6 ticklers by 11 or 13 up and downs); (2) decrease the size and weight of the chains to keep impacts low; (3) increase chain hardness (grade) to minimize wear and stretching; (4) place tickler chains on top of up and down chains (allows gear to slide rather than dig); (5) use rubber cookies at each shackle to prevent wear; and (6) minimize bottom impacts by keeping gear light (DuPaul *et al.*, 2004). The report does not include criteria related to enforcement. The first criterion in the gear design is to prevent turtles of a certain size from entering the dredge bag. This criterion notes a particular number of chains, presumably the number of chains needed to achieve this objective. During initial testing, the gear was hung in typical rock chain fashion which resulted in as much as a 32-inch (81.3-cm) diagonal between connection points. To correct for this, the design was modified to hang the horizontal chains straight across the opening (DuPaul *et al.*, 2004). This information indicates that the gear was designed to achieve a particular spacing between the chains. That is, the criteria was to create an opening sufficiently small enough to prevent sea turtles of a certain size from entering the gear. While there may not have been an expectation of uniform openings, it is clear that the openings need to be small enough to prevent sea turtles from passing through the chains into the dredge bag. Based on the information provided to NMFS on the size of the openings in the experiment to test the chain-mat modified gear and the species identification and size of sea turtles taken in this fishery, NMFS believes that openings of 14 inches (35.5 cm) or less will prevent most sea turtles from entering the dredge bag and will prevent the injury and mortality resulting from such capture. Under these requirements, the openings do not need to be uniform but cannot be larger than 14 inches (35.5 cm) per side.

The criteria also included decreasing the size and weight of the chains in order to keep impacts low (criteria 2 and 6). The report does not include information on the type of impacts being considered in criteria 2 and it is possible that this criteria included impacts related to dredge efficiency. However, as described in the response to Comment 20, the weight of the chain-mat modified gear is not substantially different than the unmodified gear. Therefore, NMFS does not anticipate that the additional weight of the chain mat will significantly impact the dredge efficiency. In addition, the openings required in the regulation are based on the experimental fishery to test the chain mat modified gear (see response to Comment 19).

*Comment 19:* A fixed number of chains based on dredge width is the only configuration that has been rigorously tested on a variety of dredge widths and has been proven effective in eliminating virtually all incidence of sea turtles becoming entrapped in the dredge. If the agency believes a different design would be more efficacious, it should test such gear to account for all factors relevant to turtle takes, and collect empirical data on other conservation or economic impacts. There is no data showing the impacts of chains configured to comply with the 14-inch (35.5-cm) requirement. The commenter urges NMFS to re-adopt a fixed number of chains based on dredge width as the change to the 14-inch (35.5-cm) requirement is based on a misinterpretation of the science upon which the gear is based, has unknown implications for sea turtle protection, conservation and economic impacts, and presents an enforcement concern.

*Response:* The size of the opening created by the chains is the important factor in preventing sea turtles from entering the dredge bag, not the number of chains. Although the size of the openings is not provided in the final report (DuPaul *et al.*, 2004), the information provided to NMFS during the development of the chain mat requirements was that the configuration tested during the experimental fishery had openings that were less than 14 inches.

The experimental fishery was conducted with 11-ft (3.35-m), 14-ft (4.27-m), and 15-ft (4.57-m) dredges. The 14-ft (4.27-m) and 15-ft (4.57-m) dredges had 11 vertical chains and 6 horizontal chains; while the 11-ft (3.35-m) dredge had 9 vertical chains and either 5 or 6 horizontal chains. The table included in the original rule included dredges binned into four groups: less than 10 ft (3.05 m), 10 ft (3.05 m) to less than 11 ft (3.35 m), 11 ft (3.35 m) to 13 ft (3.96 m), and greater than 13 ft (3.96 m). Dredges of several widths fall into each grouping. Therefore, only a subset of the dredge widths included in the table were actually tested in the experimental fishery. Two of these dredge widths tested fall into the bin for dredges greater than 13 ft (3.96 m). The number of horizontal chains included in the original chain-mat regulation for an 11-ft (3.35-m) dredge based on dredge width was 5. However, the 11-ft dredge tested in the experiment used 5 or 6 horizontal chains. If the 11-ft dredge in the experimental fishery used 5 horizontal chains, this configuration would also have been tested.

In addition, dredges of the same width may be configured differently. As such, the same number of chains on two dredges with the same width, may not result in the same size openings. For example, the distance between the cutting bar and the sweep is known to vary by up to 1.7 ft (0.5 m) for certain dredge widths (NMFS 2007). Given the variability in the distance between the cutting bar and the sweep, it would be difficult to specify a number of horizontal chains that would achieve the desired spacing. As noted above, the chains wear and become longer with

time, and this wear depends on a number of factors including the chain used and the bottom habitat fished. This variability may be difficult to account for in a table. As a result of these factors, the rule does not define the configuration based on a number of vertical and horizontal chains required, but by the desired size of the opening, which is the important factor for sea turtle conservation. Based on the results of the experimental fishery and information on the sea turtles observed taken in this fishery, NMFS has determined that a spacing of 14 inches (35.5 cm) or less will prevent most sea turtles from being captured in the dredge bag. Enforcement and safety are addressed in the response to Comment 17 and conservation and economic impacts are addressed in the response to Comment 20.

*Comment 20:* As a precaution, fishermen are rigging the chain mats with rectangles with sides of no more than 11 inches (27.9 cm) or 12 inches (30.5 cm) to avoid being found in violation. As a result, the data collected during the experimental fishery is not applicable. The economic impact will greatly exceed that currently assumed due to greater loss of scallops, increased fuel consumption due to the heavier mat and increased drag, additional loss of fishing time while emptying the bags, and increased stretching/breaking of the chains. Vessels may tow longer to offset the loss of scallops, increasing bottom time which has habitat implications and may have unintended consequences on protected species.

*Response:* The total weight of a sea scallop dredge with a width of 15 ft (4.57 m) is approximately 4,500 lbs (2041 kg) for the dredge frame, chain bag, and club stick. Weights may vary slightly due to differences in materials and configuration. The weight of the chain mat is estimated to be between 56 lbs (25.4 kg) for a 10-ft (3.05-m) dredge and 147 lbs (66.7 kg) for a 15-ft dredge (4.57-m)(e-mail from Henry Milliken (NEFSC) to Richard Merrick (NEFSC), October 1, 2004). Assuming 20 percent additional chains and shackles would be required for some vessels to comply with the 14-inch (35.5-cm) requirement (a conservative overestimate) (memo from Ellen Keane (NERO) to The File, October 3, 2007), the range of weights would increase by 11 lbs (5 kg) for a 10-ft (3.05-m) dredge and 29 lbs (13 kg) for a 15-ft (4.57-m) dredge. The weight of the chain mat, and the additional chain required to configure the openings to the 14-inch (35.5-cm) requirement, is relatively small compared to the weight of the dredge. Some vessels that choose to rig their gear at 11 inches (27.9 cm) or 12 inches (30.5 cm) to account for stretch in the chains may need to use additional chain. However, this is not expected to substantially increase the weight of the chain-mat modified gear. As the weight of the modified dredge is not significantly different from an unmodified dredge, the additional chain is not expected to substantially impact the efficiency of the gear.

The economic costs of the chain mat requirements include costs required to configure and maintain the gear, costs due to loss of catch, and costs associated with a loss of efficiency. The costs to configure the gear result from the cost of materials and the cost of labor. The cost of materials and labor is estimated from approximately $200 for a dredge less than 10-ft (3.05-m) up to $460 for a 15-ft (4.57-m) dredge. These costs will vary depending on the type and size of chain used. Maintenance of the gear will be required as the chain mats wear. Vessels that configure the opening at or near the 14-inch (35.5 cm) requirement may need to readjust the gear more frequently than vessels that configure the opening less than 14 inches (35.5 cm) to allow for wear. In addition, the longevity of the chain is affected by numerous factors including the type of chain used, the bottom fished, and the configuration of the gear. All of these may affect the frequency with which the chains need to be replaced. Vessels fishing on sandy bottom will likely need to replace the gear less frequently than vessels fishing on rockier bottom. Information from the observer program indicates that the chains do stretch and break. One observer noted that the chains need to be re-adjusted once per a trip to once every three trips (memo from Pasquale Scida to The File, March 11, 2008). In addition, the observer logs indicate that the links/shackles connecting the chains break, but that these are relatively simple and quick repairs. If a high-quality chain is used, NMFS anticipates that the chain mat would need to be replaced in its entirety over the course of a fishing season. It is unlikely that the gear will be replaced all at once as broken links and shackles will be repaired as they occur over the course of the year. Nevertheless, the vessel would incur the costs associated with configuring gear each year. This replacement cost is considered in the EA/FRFA/RIR for this action.

In assessing the impacts of requiring this gear modification, the analysis of the cost due to a loss of catch is based on the average loss of scallops that was observed in the experimental fishery. Although measurements of the opening are not included in the final report on the experiment (DuPaul *et al.*, 2004), all of the information provided to NMFS during the rulemaking indicated that the size of the openings tested was less than or equal to 14 inches (35.5 cm), ranging from 11 to 14 inches (27.9 to 35.5 cm). The data from the experimental fishery shows that scallop catches were highly variable from vessel to vessel and trip to trip, ranging from a −30.88 percent to a 7.28 percent difference, with the average loss of sea scallop catch approximately 6.7 percent (DuPaul *et al.*, 2004). The researchers believe that this variability will decrease as vessels became more familiar with the gear (DuPaul *et al.*, 2004). The size of the openings tested in the experimental fishery is the size of the openings that are required under the current regulations and this final regulation. It is possible that the loss of scallops may vary if the openings in the chain mats are configured significantly smaller than those tested in the experiment. However, there is no data available at this time to evaluate this difference. Therefore, the loss of catch is based on the experimental fishery.

Other potential costs are those due to increased drag, weight, and tow times, as well as increased fuel consumption, which will result from adding chains to the dredge. As described above, the difference in weight between an unmodified dredge and a chain-mat modified dredge is not substantial and NMFS does not anticipate any significant costs resulting from extra weight on the gear. As described above, the size of the openings is based on the experimental fishery to test the modified gear. The final report on the study does not indicate that the dredge bag was more difficult to empty. It is expected that as fishermen become more familiar with the gear, difficulties that may be associated with dumping the bag will decrease. In general, the chain-mat modified dredge with openings of 14 inches (35.5 cm) or less has been required in the Atlantic sea scallop dredge fishery for one fishing season, with minimal reports of economic disruption that are described herein. More detailed information on the analysis can be found in the EA/RIR/IRFA for this action.

The area swept by the modified and the unmodified dredge gear is the same. However, as described in the Final EA, an increase in disturbance to bottom sediments is expected whenever the chain mats are used. Vessels are expected to continue to fish in the same areas, but a loss of scallops may be offset by increasing the tow time. The sediment type in the regulated area has a rapid recovery time and impacts to habitat are expected to be minimal. In

addition, the researchers believe that this variability in catch retention will decrease as vessels became more familiar with the gear (DuPaul *et al.*, 2004). Thus, as vessels become more familiar with fishing the chain-mat modified gear, these impacts will be even further minimized. As described in the response to Comment 24, it is not known whether turtles interact on the bottom or in the water column. Therefore, it is not known whether the increased tow times would result in a greater risk of interaction. It is reasonable to assume that interactions are occurring both on the bottom and in the water column, but the proportion of interactions occurring in each of these cannot be quantified. While increased tow times may result in an increased risk for sea turtles, this risk is limited by the facts that the average loss of scallops was fairly small ~6.7 percent) and that as fishermen become more familiar with the gear, it is expected that the chain-mat modified dredge will be more comparable to the unmodified dredge. This will lessen the need to offset a loss of catch. While the loss of catch may be greater than that observed in the experiment if fishermen rig the gear significantly different than that tested in the experiment, NMFS cannot quantify what this loss would be. From the information available, it appears that vessels are rigging the gear in the same manner that was tested (*i.e.*, approximately 11- to 14-inch (20.9–35.5 cm) openings).

*Comment 21:* Vessels have received violations for broken chains. We recommend that NMFS add a requirement that any broken chains be fixed immediately, but make it clear that a broken chain itself cannot support a violation. A violation could be given if a vessel deploys a dredge with a broken chain.

*Response:* NMFS recognizes that chains and links/shackles will break during normal fishing activity. These breaks must be repaired before redeploying the gear. In addition, the gear must be readjusted as necessary to ensure that the openings maintain a spacing of 14 inches (35.5 cm) or less. Broken chains have been noted during boardings by enforcement agents. NMFS enforcement agents and the USCG have discretion when conducting boardings and can take into account whether the captain or crew is in the process of repairing broken chains.

*Comment 22:* One commenter supported the transiting provision; while a second commenter was opposed to this provision. This commenter objected to the limitation that requires vessels that transit the area and fish exclusively north of the line to install chains before transiting home. The commenter stated that allowing vessels to stow their gear while in transit would not implicate any reasonable enforcement concern. It is unlikely that vessels fishing in the mid-Atlantic would undertake the labor intensive action of removing the chains to steam home, but in the event they did, no harm exists as long as the dredges are stowed and unavailable for use. Vessels fishing in the mid-Atlantic could be identified easily through Vessel Monitoring System (VMS) data.

*Response*: With the clarifications to the existing regulatory text, vessels that transit through areas south of 41° 9.0′ N. latitude would be required to use chain mats while fishing north of that line. That is not the intent of the regulation as sea turtle interactions north of the line are unlikely. Therefore, NMFS has added a transiting provision that would exempt vessels from the chain mat requirements provided that there are no scallops on board and the gear is stowed. NMFS recognizes that this provision requires vessels fishing north of the line to either land the catch north of the line or install chain mats before transiting back through the regulated area. This provision is necessary as vessels that fish north of the line on a trip cannot be distinguished from those that fish south of the line once they transit south. Some have suggested that VMS can be used to identify where these vessels were fishing for the purposes of enforcing this regulation. At this time, regulations require scallop vessels to be responsible for position reports ''at least twice per hour.'' Although it is sometimes possible to determine a vessel's activity (such as fishing) from half-hour polls, half-hour polls alone often do not provide a full picture of where the vessel was between polls. Therefore, increased polling would be necessary to determine where the vessel was fishing. Increased polling is not possible because the current technology provided by the VMS providers does not support changing the reporting rate by fishery declaration. Before a vessel starts a trip, it must declare through VMS whether the trip will be general category or limited access and the area in which it will fish. The vendors do not have the capacity to sort through the declarations and target polling intervals accordingly.

*Comment 23*: NMFS must withdraw and re-evaluate the proposed rule, including revising the NEPA analysis, to take into account the status of loggerheads and the apparent failure of the turtle chains.

*Response*: As described in the response to Comment 1, the chain-mat modification has not failed, but rather has been improperly implemented in some cases. This has resulted in the capture of sea turtles in the dredge bag. The available information shows that, when properly implemented, the gear modification will prevent most captures and injuries resulting from such capture. In evaluating the impacts of this gear modification, the EA has taken into account the status of loggerheads (see response to Comment 12).

*Comment 24*: It is not known what happens when turtles interact with the chain mat modified dredge and there is a significant risk that the chains do not reduce take, but simply change the nature of the interaction. The proposed action may do very little to reduce mortality and injury to sea turtles. NMFS admits that the chain mat configuration would not lessen the number of sea turtles taken, injured, or killed by the dredge on the sea floor. It stands to reason that a significant number of the sea turtles that are seriously injured and end up dying are caught on the sea floor as the dredge is towed on the sea floor for far more time than it is hauled up to the boat through the water column. The EA does not appear to analyze how often injuries occur from interactions with the dredge in the water column, but the implication is that even without the turtle chains, such interactions are unlikely.

*Response*: NMFS recognizes the uncertainty regarding whether sea turtles interact with sea scallop dredges as the dredge is dragged along the bottom, as the dredge is hauled back, or both. It takes approximately 1 minute to set a dredge and approximately 10 minutes to haul back, dump the catch, and reset the gear. For the remainder of the haul, the gear is on the bottom. However, it is not known where sea turtles are encountering the gear. It is likely that sea turtles are interacting with the gear both in the water column and on the bottom. Sea turtles have been observed in the area in which sea scallop gear operates and they have been seen near scallop vessels when they are fishing or hauling gear. In addition, sea turtles are known to forage and rest on the sea floor as part of their normal behavior. The condition of sea turtles observed taken in the sea scallop dredge fishery ranges from alive with no apparent injuries to alive and injured to fresh dead. Some of these injuries have been reported to occur after the gear has been brought on-board the vessel (DuPaul *et al.*, 2004; NEFSC, FSB, Observer Database). As described in the EA, NMFS believes that interactions

between sea turtles and sea scallop dredge gear that occur on the bottom are likely to result in serious injury to the sea turtle. Based on this assumption, NMFS believes that the unharmed/slightly injured turtles observed captured in the sea scallop dredge bag follow an interaction with sea scallop dredge gear in the water column. The most recent Biological Opinion anticipates that up to 929 loggerhead sea turtles will be captured by sea scallop dredge gear biennially, and that up to 595 of these may sustain serious injury or mortality (as defined in the NMFS Northeast Region ''Serious Injury Determinations for Sea Turtles Taken in Scallop Dredge Gear—Working Guidance'').

Data do not exist on the percentage of sea turtles interacting with the chain mat-modified gear that will be unharmed, sustain minor injuries, or sustain serious injuries that will result in death or failure to reproduce. However, there are several assumptions that can be made to assess the degree of interaction. With the chain mat installed over the opening to the dredge bag, it is reasonable to assume that sea turtles, which would otherwise enter the dredge bag, will instead come into contact with the chain mat at least. NMFS recognizes that this modification may not reduce the number of sea turtles interacting with sea scallop dredge gear, but it is reasonable to assume that the modification will reduce mortality and the severity of injury following interactions that occur in the water column. Some of the seriously injured sea turtles probably obtained those injuries after being caught in the water column by unmodified gear, because the turtles were captured in the dredge bag. After an interaction in the water column, severe injuries and mortality to sea turtles following capture in a dredge bag without the chain mat configuration likely result from crushing by debris in the dredge bag, dumping of the turtle on the vessel's deck, or crushing them with falling gear. NMFS does not have information on the proportion of takes occurring in the water column. However, preventing the turtles from entering the dredge bag will prevent injuries resulting from such capture.

With the chain mat in place, it is reasonable to assume that the sea turtles on the sea floor would still interact with the gear, but that the nature of the interaction would be different. With the modified gear, the sea turtles may still be hit by the leading edge of the frame and cutting bar and would likely be forced down to the sea floor rather than swept into the dredge bag. Since the turtles are not being swept into the bag, they could be run over by the dredge bag and club stick. At this point, the turtle will have likely already been hit and run over by the cutting bar and the leading edge of the dredge frame, which constitutes a substantial weight.

As described in the response to Comment 3, NMFS worked with industry to evaluate a dredge designed to minimize impacts from interactions with a sea turtle encountered on the bottom (NMFS, 2005; Milliken *et al.*, 2007). The video from the 2005 study did show that it is possible that sea turtles encountering the dredge on the bottom may become caught on the chains after being hit by the leading bar of the dredge. However, this follows the turtle being struck by the leading edge of the dredge during which it is likely to have sustained serious injuries.

NMFS has made the conservative assumption that a turtle in a bottom interaction sustains serious injuries on the bottom regardless of whether the chain mat is used. Under this conservative assumption, there would not be a benefit from the chain mat for bottom interactions. This assumption, however, may be too conservative in that it is possible that turtles in a bottom interaction may only receive minor injuries. In the unlikely scenario of a turtle receiving only minor injuries following a bottom interaction, the chain mat modification would prevent serious injuries that result from capture in the dredge bag (i.e., injuries from debris in the bag, forced submergence, dropping on deck, or crushing by the dredge). A detailed description the assumptions made and the assessment of the interactions can be found in the EA on this action.

The chain mats have been noted in four reported interactions. During the pilot study to test the chain-mat modified gear, a sea turtle was reported on the chain mat, subsequently swimming away as the gear was hauled to the surface. The NEFSC FSB has documented other interactions where the sea turtle is observed on the dredge gear, swimming away as the gear nears/breaks the surface. NMFS has no indication that this type of interaction would result in serious injury. The sea turtle may be held against the gear by water pressure as the gear moves through the water. Once the pressure is relieved, the animal is able to swim away. In 2007, two sea turtles were observed captured in the dredge bag. As described in the response to Comment 1, the gear modification was improperly configured in each of these cases, resulting in the capture in the dredge bag.

In 2007, a sea turtle was reported as being caught between the chains and the dredge, on the outside of the chain mat. This animal was unable to swim away and was brought aboard the vessel. It is not known exactly where or how the turtle was caught/hung up in the gear nor is it known whether the chain mat contributed to the interaction or the injuries resulting from the interaction. It is also not known whether this interaction occurred on the sea floor or in the water column. NMFS is not aware of any other interactions of this nature and it is possible that this interaction was a unique event on an individual haul. NMFS will continue to work with the observers to gain a better understanding of how sea turtles may be interacting with other parts of the dredge gear (i.e., outside of the dredge bag) and to determine whether this interaction was, in fact, a unique event.

*Comment 25:* In their comments on the original chain mat regulation, one commenter stated that the EA for the August 2006 rule contends that the chain mat modification would significantly benefit sea turtles and that the characteristics of the geographic area, the presence of loggerhead sea turtles, indicate the need for an Environmental Impact Statement. They also state that the action considered in the EA is highly controversial, highly uncertain, and creates a significant precedent.

*Response:* The EAs on the chain mat requirements support a finding of no significant impact. There is expected to be a benefit to sea turtles by reducing significant injury and mortality following a take in the water column; however, the degree of benefit is limited given that the installation of a chain mat would only reduce the severity of injuries resulting from a portion of possible takes. No unique characteristics of the geographic area were identified. The presence of loggerhead sea turtles in the mid-Atlantic is not a unique characteristic of the area. The gear modifications are limited in geographic area and time and are implemented in an effort to facilitate the coexistence of fishing activity and sea turtles. These factors restrict the scope of the effects. This action is not highly controversial given that the action is designed to benefit sea turtles, it would have a relatively small impact on the fishing industry, and the industry has petitioned NMFS for a similar action, albeit over a shorter time period each year, slightly different geographic area, and for a fixed number of chains.

While there is not perfect information available on the nature of the interaction between sea scallop dredge gear and sea

turtles, NMFS has made reasonable assumptions in evaluating the risks and benefits of this action. The best available scientific information shows that the use of the chain mat will prevent most sea turtles from entering the dredge bag and injuries ensuing from such capture. The action also does not set a significant precedent as gear modifications are a commonly used tool to reduce the severity of interactions between fishing gear and sea turtles.

*Comment 26:* The proposed action could have profound adverse effects on efforts to protect loggerhead sea turtles and thus on loggerhead turtle populations. Without video monitoring, no one will know how many loggerhead turtles were taken, injured, and killed underwater, an accurate estimate of sea turtle takes would be impossible, and neither individuals nor the agency would be able to assess whether these takes may exceed the incidental take statement. Deploying adequate monitoring for sea turtle takes must be considered and adopted.

*Response:* NMFS recognizes that interactions between sea scallop dredge gear and sea turtles are likely to occur and that these interactions may not be observed from on deck. As described above, NMFS will continue to use observer information, fishing effort data, and other data, as available, to monitor the fishery and its possible effects on sea turtles. NMFS will use observer data to continue to evaluate the take of sea turtles in other parts of the dredge (e.g., the forward parts of the frame and on top of the gear) as well as to better understand stretch and breakage in the chain mat gear. NMFS has developed a methodology to assess compliance with the ITS.

Prior to the chain mat requirement, observer coverage was used as the principal means to estimate sea turtle bycatch in the scallop fishery and to monitor incidental take levels provided in biological opinions for the scallop fishery. However, the use of chain mats on scallop dredge gear is expected to greatly reduce the likelihood that sea turtles struck by or incidentally swimming into scallop dredge gear would enter the bag and be carried to the surface (70 FR 30660, May 27, 2005; 71 FR 50361, August 25, 2006; 72 FR 63537, November 9, 2007). Injuries to sea turtles that occur as a result of the turtle being struck by the dredge gear underwater will continue to occur but will not be observed unless the turtle is small enough to pass between the chains and enter the dredge bag or is otherwise caught on the dredge frame and carried to the surface. Based on information provided by the NEFSC on fishery dependent and fishery independent approaches to monitoring bycatch (memo from John Boreman to Patricia A. Kurkul, March 6, 2006), NERO concluded that a method does not currently exist for enumerating sea turtle taken by chain-mat equipped scallop dredge gear that meets the NEFSC's definition of a scientifically robust and accurate take estimate and the guiding principles for the preparation of biological opinions provided in the Final ESA Section 7 Handbook developed jointly by the Fish and Wildlife Service and NMFS (memo from Patricia A. Kurkul to The Record, April 5, 2006; NMFS, 2008). In the absence of a method for enumerating most takes to monitor the ITS on the scallop dredge fishery, NMFS has developed a method of monitoring the fishery, as a proxy. Specifically, NMFS will use dredge hours as a surrogate measure of actual takes, and find that the ITS provided in the Biological Opinion has been exceeded when the fishery operates in a manner that, based on the best available information, would reasonably likely result in greater sea turtle interactions with scallop dredge gear than what is estimated to have occurred in 2003 and 2004 (NMFS, 2008). A detailed description of the approaches considered and the methodology chosen to monitor sea turtle takes in the dredge component of the fishery are included in the Biological Opinion and the associated memoranda (NMFS, 2008; memo from John Boreman to Pat Kurkul, March 6, 2006; memo from Patricia A. Kurkul to The Record, April 5, 2006).

As described previously, there have been several projects designed to look at the details of sea turtle-sea scallop dredge interactions (DuPaul *et al.*, 2004; Smolowitz *et al.*, 2005; Smolowitz and Weeks, 2006; Milliken *et al.*, 2007). It is evident from these studies that using video to document the specific nature of sea turtle-sea scallop dredge interactions, in general, and sea turtle-chain mat interactions specifically, is logistically difficult given the low interaction rate. To date, no sea turtles have been documented on video used in the commercial fishery. Additional difficulties identified through these studies include low visibility due to water clarity and available light, improper focus, inappropriate camera angle, and the range of viewing field. Requiring all scallop dredges using the modification to carry observers and monitor underwater interactions with video cameras may provide some additional information on interactions between sea turtles and scallop dredges. However, given the low rate of interaction and the technical challenges of underwater video, it is not clear that this approach would provide sufficient information to understand the nature of these interactions.

In addition, this level of coverage is infeasible at this time given existing resources. The video would need to be reviewed by the observer or NMFS personnel upon completion of the trip. If the observer was to review the video in real-time, they would likely be unable to collect all the information, including discards, biological information on the catch, and gear performance and characteristics, that is currently collected and utilized by NMFS. Given the total dredge hours in the mid-Atlantic, review of the video taken would require additional resources. NERO has investigated the feasibility of using video technology on a subset of vessels to monitor sea turtle-sea scallop dredge interactions and found that, at this time, video monitoring is not feasible. The use of video monitoring is discussed in detail in the most recent Biological Opinion (NMFS 2008).

Despite the challenges associated with using video to document interactions between sea turtles and sea scallop dredges, NMFS does plan to continue to collect video in conjunction with other gear projects. These projects may shed light on how to overcome the difficulties of using video to monitor sea turtle behavior and interactions with gear.

*Comment 27:* NMFS should put in a cap system that would have 100 percent observer coverage, including underwater video monitoring, and would shut down the fishery when they reached their capped level of turtle takes.

*Response:* As described in the response to Comment 26, 100 percent observer coverage with video monitoring is not feasible at this time. The anticipated level of take and the monitoring of the ITS are addressed through the section 7 process under the ESA.

*Comment 28:* Turtle chains are not scientifically validated. The information used to support the chain mat requirements is based on assumptions and guesswork, not scientific research and this information is inadequate. The studies on which the chain-mat modification is based are fatally flawed as they rely only on on-deck observations and so only addressed whether the chain mat could reduce the number of sea turtles caught in the dredge and did not address whether the chains reduced the number of sea turtle

takes, injuries, and deaths caused by scallop dredging. It is crucial to study the effects of the chains through underwater video monitoring.

*Response:* The experimental fishery used two paired dredges, one equipped with a standard dredge and one equipped with a modified dredge. This paired design is an industry standard in gear work and is utilized to minimize unaccountable environmental variation. The study involved over 3000 paired hauls, which resulted in enough statistical power to be able to detect differences in the turtle catches between the modified and the unmodified dredge. There was a statistical difference between turtle catches in the control and modified dredges (at alpha—0.05 level). NMFS recognizes that these studies relied on on-deck observations, and that sea turtles may be struck by the dredge while fishing near the bottom or while being hauled through the water column and not brought onboard. Unfortunately, these types of interactions cannot be quantified at this time because information on these interactions does not exist. However, the best available information does show that the chain mat modification prevents most captures of sea turtles in the dredge bag; thereby preventing injury and mortality that occur from such capture. Nevertheless, NMFS intends to use video in conjunction with other projects in an attempt to learn more about sea turtle-sea scallop dredge interactions (see response to Comment 3).

*Comment 29:* NMFS must obtain data on sea turtles' oceanic and neritic life history stages by conducting in-water surveys for all sea turtle species in order to accurately determine sea turtle abundance and population structure.

*Response:* NMFS concurs that data on sea turtles' oceanic and neritic life history stages from in-water surveys is important in determining sea turtle abundance and population structure. The preliminary findings of the TEWG offer recommendations regarding research that include a program to provide annual estimates of turtles in the NE and SE regions which would include a survey program to obtain estimates of total turtle in-water tagging studies and nesting beach tagging studies (memo from Nancy Thompson to James Lecky, December 4, 2007).

**Classification**

The rule has been determined to be not significant under Executive Order 12866.

NMFS prepared an initial regulatory flexibility analysis for the proposed rule, which was described in the classification section of the preamble to the proposed rule. The public comment period ended on December 10, 2007. One comment was received on the economic impacts of the proposed action (comment/response 20 in this final rule). No changes were made as a result of the comment.

NMFS has prepared a final regulatory flexibility analysis (FRFA) that describes the economic impact this final rule would have on small entities. A description of the action, why it is being considered and the legal basis for this action are contained at the beginning of the preamble, in the SUMMARY, and in the FRFA. A summary of the analysis follows:

The fishery affected by this final rule is the Atlantic sea scallop dredge fishery. The action requires all vessels with a Federal Atlantic sea scallop fishery permit, regardless of dredge size or vessel permit category, that enter waters south of 41°9.0′ N. latitude, from the shoreline to the outer boundary of the EEZ to modify their dredge gear with a chain mat. Vessels transiting the area are exempt from this requirement provided that the gear is stowed and there are no scallops on board. According to Vessel Trip Report Data for 2003, 314 vessels fished in this area from May 1 through November 30. The economic analysis assumes that all 314 vessels are independently owned and operated. All 314 sea scallop dredge vessels are considered small entities.

This final rule does not contain any additional reporting, recordkeeping, or other similar compliance requirements.

The FRFA considered three alternatives. The preferred alternative (PA), Alternative 1, and the ''no action'' alternative. The PA, alternative 1, and the ''no action'' alternative were analyzed in the regulatory flexibility analysis and summarized in the proposed rule (72 FR 63537, November 9, 2007). NMFS selected the preferred alternative in the final rule (modification of the current regulatory requirements) because this alternative would clarify the regulatory language and add a transiting provision while maintaining the level of protection to sea turtles. The agency minimized impacts to small entities from the requirement to use chain-mat modified gear by limiting the requirements to the May through November time period and limiting the spatial extent to south of 41°9.0′ N latitude. NMFS rejected Alternative 1 (no chain mat requirement) because this alternative would leave sea turtles vulnerable to capture in the sea scallop dredge bag and to injury and mortality that may result from such capture. This alternative would have the least economic impact. NMFS also rejected the no action alternative. Although this alternative would provide the same level of protection to sea turtles as the preferred alterative, this alternative does not clarify the regulatory requirements or provide a transiting provision.

This final rule is consistent with the ESA and other applicable laws.

**Literature Cited**

Bartol, S. M., J. A. Musick, and M. L. Lenhardt. 1999. Auditory evoked potentials of the loggerhead sea turtle (*Caretta caretta*). Copeia 1993(3):836–840.

Bjorndal, K. A. 1999. Priorities for research in foraging habitats. Pp. 12–14. In: Eckert, K.L., K.A. Bjorndal, F. Alberto Abreu-Grobois, and M. Donnelly (eds.) Research and management techniques for conservation of sea turtles. IUCN/SSC Marine Turtle Specialist Group Publication Number 4.

Braun-McNeill, J., and S. P. Epperly. 2002. Spatial and temporal distribution of sea turtles in the western North Atlantic and the U.S. Gulf of Mexico from Marine Recreational Statistics Survey (MRFSS). Marine Fisheries Review 64(4):50–56.

Bell, C. D., J. Parsons, T. J. Austin, A. C. Broderick, G. Ebanks-Petrie, and B. J. Godley. Some of them came home: the Cayman Turtle Farm headstarting project for the green turtle Chelonia mydas. Oryx. 39(2):137–147.

CeTAP (Cetacean and Turtle Assessment Program). 1982. Final report on the cetacean and turtle assessment program. University of Rhode Island to Bureau of Land Management, U.S. Department of the Interior. Ref. No. AA551–CT8–48. 568 pp.

Coles, W. C. 1999. Aspects of the biology of sea turtles in the mid-Atlantic bight. Unpublished dissertation, The College of William and Mary in Virginia. 149 pp.

Crouse, D. T., L. B. Crowder, H. Caswell. 1987. A stage-based population model for loggerhead sea turtles and implications for conservation. Ecology 68:1412–1423.

Dodd, M. 2003. Northern recovery unit—nesting female abundance and population trends. Presentation to the Atlantic Loggerhead Sea Turtle Recovery Team, April 2003.

DuPaul, W. D., D. B. Rudders, and R. J. Smolowitz. 2004. Industry trials of a modified sea scallop dredge to minimize the catch of sea turtles. Final Report. November 2004. VIMS Marine Resources Report, No. 2004–12. 35 pp.

Ehrhart, L. M, W. E. Redfoot, D. A. Bagley. 2007. Marine turtles of the central region of the Indian River lagoon system, Florida. Biological Sciences 2007(4):415–434.

Epperly, S. P., J. Braun-McNeil, and P. M. Richards. 2007. Trends in catch rates of sea turtles in North Carolina, USA. Endangered Species Research 3:283–293.

FWRI (Florida Fish and Wildlife Conservation Commission, Fish and Wildlife Research Institute). 2007. Long term monitoring program reveals a continuing loggerhead decline, increases in green turtle and leatherback nesting. 2 pp.

Heppell, S. S. 1998. An application of life history theory and population model analysis to turtle conservation. Copeia 1998:367–375.

Heppell, S. S., L. B. Crowder, D. T. Crouse. 1996. Models to evaluate headstarting as a management tool for long-lived turtles. Ecological Applications. 6:556–565.

Heppell, S. S., L. B. Crowder, D. T. Crouse, S. P. Epperly, and N.B. Frazer. 2003. Population models for Atlantic loggerheads: past, present, and future. In A.B. Bolten and B. E. Witherington (editors) Loggerhead sea turtles. Smithsonian Institute, Washington, D.C. pp. 255–273.

Huff, J. A. 1989. Florida terminates headstart program. Marine Turtle Newsletter. 46:1–2

James, M. C., C. A. Ottensmeyer, and R. A. Myers. 2005. Identification of high-use habitat and threats to leatherback sea turtles in northern waters: new directions for conservation. Ecol. Lett. 8:195–201.

Keinath, J. A., J. A. Musick, and R. A. Byles. 1987. Aspects of the biology of Virginia's sea turtles: 1979–1986. Virginia J. Sci. 38(4):329–336.

Lawson, D. D. and J. T. DeAlteris. 2006. Evaluation of a turtle excluder device (TED) in the scallop trawl fishery in the mid-Atlantic. Final Contract to National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, MA. Contract No. EA133F–105–SE6561. 145 pp.

Lenhardt, M. L., S. Moein, and J. Musick. 1995. A method for determining hearing thresholds in marine turtles. In Keinath, J. A., D. E. Barnard, J. A. Musick, and B. A. Bell. 1996. Proceedings of the Fifteenth Annual Workshop on Sea Turtle Biology and Conservation. NOAA Technical Memorandum NMFS–SEFSC–387, 355 pp.

Maier, P. P., A. L. Segars, M. D. Arendt, J. D. Whitaker, B. W. Stender, L. Parker, R. Vendetti, D. W. Owens, J. Quattro, and S. R. Murphy. 2004. Development of an index of sea turtle abundance based on in-water sampling with trawl gear. Final report to the National Marine Fisheries Service. 86 pp.

Mansfield, K. L. 2006. Sources of mortalities, movements, and behavior of sea turtles in Virginia. Chapter 5. Sea turtle population estimates in Virginia. Pp. 193–240. Ph.D. dissertation. School of Marine Science, College of William and Mary.

McCauley, R. D., J. Fewtrell, A. J. Duncan, C. Jenner, M. N. Jenner, J. D. Penrose, R. I. T. Prince, A. Adhitya, J. Murdoch, and K. McCabe. 2000. Marine seismic surveys: analysis and propagation of air-gun signals; and effects of air-gun exposure on humpback whales, sea turtles, fishes and squid. Report R99–15. Centre for Marine Science and Technology, Curtin University of Technology, Western Australia. 198 pp.

Meylan, A., B. E. Witherington, B. Brost, R. Rivero, and P. S. Kubilis. 2006. Sea turtle nesting in Florida, USA: Assessments of abundance and trends for regionally significant populations of Caretta, Chelonia, and Dermochelys. pp 306–307. In: M. Frick, A. Panagopoulou, A. Rees, and K. Williams (compilers). 26th Annual Symposium on Sea Turtle Biology and Conservation Book of Abstracts.

Milliken, H. O., L. Belskis, W. DuPaul, J. Gearhart, H. Haas, J. Mitchell, R. Smolowitz, and W. Teas. 2007. Evaluation of a modified scallop dredge's ability to reduce the likelihood of damage to loggerhead sea turtle carcasses. U.S. Dep Commer., Northeast Fisheries Science Center Reference Document 07–07. Northeast Fisheries Science Center. Woods Hole, MA. 30 pp.

Morreale, S. J. and E. A. Standora. 1998. Early life stage ecology of sea turtles in northeastern U.S. waters. U.S. Dep. Commer. NOAA Tech. Mem. NMFS-SEFSC–413. 49pp.

Morreale, S. J., C. F. Smith, K. Durham, R. DiGiovanni Jr., A. A. Aguirre. 2004. Assessing health, status, and trends in northeastern sea turtle populations. Year-end report September 2002–November 2004 to the Protected Resources Division, NMFS, Gloucester, MA.

Morreale, S. J. and E. A. Standora. 2005. Western North Atlantic waters: Critical developmental habitat for Kemp's ridley and loggerhead sea turtles. Chelonian Conservation and Biology. 4(4)872–882.

Murray, K. T. 2004a. Magnitude and distribution of sea turtle bycatch in the sea scallop (Placopecten magellanicus) dredge fishery in two areas in the northwestern Atlantic Ocean, 2001–2002. Fish. Bull. 102:671–681.

Murray, K. T. 2004b. Bycatch of sea turtles in the mid-Atlantic sea scallop (Placopecten magellanicus) dredge fishery during 2003. 2nd ed. U.S. Dep Commer., Northeast Fisheries Science Center Reference Document 04–11. Northeast Fisheries Science Center. Woods Hole, MA. 25 pp.

Murray, K. T. 2005. Total bycatch estimate of loggerhead turtles (*Caretta caretta*) in the 2004 Atlantic sea scallop (*Placopecten magellanicus*) dredge fishery. U.S. Dep. Commer., Northeast Fisheries Science Center Reference Document 05–12. Northeast Fisheries Science Center. Woods Hole, MA. 22 pp.

Murray, K. T. 2007. Estimated bycatch of loggerhead turtles (*Caretta caretta*) in U.S. mid-Atlantic scallop trawl gear, 2004–2005, and in sea scallop dredge gear, 2005. U.S. Dep Commer. Northeast Fisheries Science Center Reference Document 07–04. Northeast Fisheries Science Center. Woods Hole, MA. 30 pp.

Musick, J. A. and C. J. Limpus. 1997. Habitat utilization and migration in juvenile sea turtles. Pp. 137–164 In: Lutz, P. L., and J. A. Musick, eds., The Biology of Sea Turtles. CRC Press, New York. 432 pp.

NMFS (National Marine Fisheries Service). 2005. Scallop dredge evaluations. F/V Capt. Wick, Panama City FL. 6/18/05–6/23/05. Report and Video. NOAA, National Marine Fisheries Service, Southeast Fisheries Science Center. Harvesting Systems and Engineering Branch. Received 7/12/2005. 8 pp.

NMFS (National Marine Fisheries Service) 2006. Final Environmental Impact Assessment and Regulatory Impact Review/ Regulatory Flexibility Act Analysis for sea turtle conservation measures in the mid-Atlantic sea scallop dredge fishery. NOAA, National Marine Fisheries Service Northeast Regional Office, Gloucester, MA. 140 pp.

NMFS (National Marine Fisheries Service) 2008. Endangered Species Act Section 7 consultation on the Atlantic sea scallop fishery management. Biological Opinion. NOAA, National Marine Fisheries Service Northeast Regional Office. Gloucester, MA.

NMFS SEFSC (National Marine Fisheries Service Southeast Fisheries Science Center). 2001. Stock assessments of loggerhead and leatherback sea turtles and an assessment of the impact of the pelagic longline fishery on the loggerhead and leatherback sea turtles of the Western North Atlantic. U.S. Dep. Commer. NMFS, Miami, Fl, SEFSC Contribution PRD 00/01–08; Parts I–III and Appendices I–IV. NOAA Tech. Mem. NMFS–SEFSC–455, 343 pp.

NMFS and USFWS (National Marine Fisheries Service and United States Fish and Wildlife Service). 2007a. Loggerhead sea turtle (Caretta caretta) 5-year review: summary and evaluation. National Marine Fisheries Service, Silver Spring, MD 65 pp.

NRC (National Research Council). 1990. Decline of the sea turtles: causes and prevention. Committee on Sea Turtle Conservation. Natl. Academy Press, Washington, D.C. 259 pp.

Ridgway, S. H., E. G. Wever, J. G. McCormick, and J. a. A. J. H. Palin. 1969. Hearing in the giant sea turtle, *Chelonia mydas*. Proceedings of the National Academy of Sciences 64(3). 884–890.

Shaver, D. P. 2005. Analysis of the Kemp(s ridley imprinting and headstart project at Padre Island National Seashore, Texas, 1978–88, with subsequent nesting and stranding records on the Texas coast. Chelonian Conservation and Biology. 4:846–859.

Shaver, D. J. And C. W. Caillouet Jr. 1998. More Kemp's ridley turtles return to south Texas to nest. Marine Turtle Newsletter. 82:1–5. [Erratum published in 1999. Marine Turtle Newsletter 83:23].

Shaver, D. J. and T. Wibbels. 2007. Head-starting the Kemp's ridley sea turtle. In Biology and conservation of ridley sea turtles. Plotkin, P.T. (ed). The Johns Hopkins University Press, Baltimore. Pp 297–323.

Shoop, C. R. 1980. Sea turtles in the Northeast. Maritimes 24:9–11.

Shoop, C. R. and R. D. Kenney. 1992. Seasonal distributions and abundance of loggerhead and leatherback sea turtles in waters of the northeastern United States. Herpetol. Monogr. 6:43–67.

Smolowitz, R. C. Harnish, and D. Rudders. 2005. Turtle-scallop dredge interaction study. Final Project Report. Submitted to U.S. Natl. Mar. Fish. Serv. Northeast Fisheries Science Center. Woods Hole. 83 pp.

Smolowitz, R. and M. Weeks. 2006. Turtle-scallop dredge interaction study, 2005 field season. Project Report. Submitted to U.S. Natl. Mar. Fish. Serv. Northeast Fisheries Science Center. Woods Hole. 45 pp.

Teas, W. G. 1993. Species composition and size class distribution of marine turtle strandings on the Gulf of Mexico and southeast United States coasts, 1985–1991. NOAA Tech. Memo. NMFS–SERFSC–315. 43pp.

TEWG (Turtle Expert Working Group). 1998. An assessment update for the Kemp's ridley (*Lepidochelys kempii*) and loggerhead (*Caretta caretta*) sea turtle populations in the western North Atlantic. U.S. Dep. Commer. NOAA Tech Memo. NMFS–SEFSC–409 96 pp.

TEWG (Turtle Expert Working Group). 2000. An assessment update for the Kemp's ridley and loggerhead sea turtle populations

in the western North Atlantic. U.S. Dep. Commer. NOAA Tech Memo. NMFS–SEFSC–444, 115 pp.

USFWS and NMFS (United States Fish and Wildlife Service and National Marine Fisheries Service). 1992. Recovery plan for the Kemp's ridley sea turtle (*Lepidochelys kempii*). NMFS, St. Petersburg, Fl. 40 pp.

White, M. 2004. Observations of loggerhead sea turtles feeding on discarded fish catch at Argostoli, Kefalonia. Marine Turtle Newsletter. 105:7–9.

**List of Subjects in Part 50 CFR Part 223**

Endangered and threatened species, Exports, Reporting and recordkeeping requirements, Transportation.

Dated: April 2, 2008.

**James W. Balsiger,**

*Acting Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.*

■ For the reasons set forth in the preamble, 50 CFR part 223 is amended as follows:

## PART 223—THREATENED MARINE AND ANADROMOUS SPECIES

■ 1. The authority citation for part 223 continues to read as follows:

**Authority:** 16 U.S.C. 1531–1543; subpart B, § 223.12 also issued under 16 U.S.C. 1361 et. seq.; 16 U.S.C. 5503(d) for § 223.206(d)(9).

■ 2. In § 223.206, paragraph (d)(11) is revised to read as follows:

**§ 223.206 Exemptions to prohibitions relating to sea turtles.**

* * * * *

(11) *Restrictions applicable to sea scallop dredges in the mid-Atlantic*—(i) Gear Modification. During the time period of May 1 through November 30, any vessel with a sea scallop dredge and required to have a Federal Atlantic sea scallop fishery permit, regardless of dredge size or vessel permit category, that enters waters south of 41°9.0′ N. latitude, from the shoreline to the outer boundary of the Exclusive Economic Zone must have on each dredge a chain mat described as follows. The chain mat must be composed of horizontal (''tickler'') chains and vertical (up-and-down) chains that are configured such that the openings formed by the intersecting chains have no more than 4 sides. The length of each side of the openings formed by the intersecting chains, including the sweep, must be less than or equal to 14 inches (35.5 cm). The chains must be connected to each other with a shackle or link at each intersection point. The measurement must be taken along the chain, with the chain held taut, and include one shackle or link at the intersection point and all links in the chain up to, but excluding, the shackle or link at the other intersection point.

(ii) Any vessel that enters the waters described in paragraph (d)(11)(i) of this section and that is required to have a Federal Atlantic sea scallop fishery permit must have the chain mat configuration installed on all dredges for the duration of the trip.

(iii) Vessels subject to the requirements in paragraphs (d)(11)(i) and (d)(11)(ii) of this section transiting waters south of 41°9.0′ N. latitude, from the shoreline to the outer boundary of the Exclusive Economic Zone, will be exempted from the chain-mat requirements provided the dredge gear is stowed in accordance with § 648.23(b) and there are no scallops on-board.

[FR Doc. 08–1107 Filed 4–2–08; 3:31 pm]

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## DEPARTMENT OF COMMERCE

### National Oceanic and Atmospheric Administration

### 50 CFR Part 226

**[Docket No. 070717354–8251–02]**

**RIN 0648–AV73**

## Endangered and Threatened Species; Designation of Critical Habitat for North Pacific Right Whale

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Final rule.

**SUMMARY:** We, NMFS, designate critical habitat for the North Pacific right whale in this rulemaking. The North Pacific right whale was recently listed as a separate, endangered species, and because this was a newly listed entity, we were required to designate critical habitat for it.

**DATES:** This rule is effective on May 8, 2008.

**ADDRESSES:** Comments and materials received, as well as supporting documentation used in the preparation of this final rule, are available for public inspection by appointment duringnormal business hours at the NMFS Alaska Region, 709 W. 9th Street, Juneau, AK 21688.

**FOR FURTHER INFORMATION CONTACT:** Brad Smith, NMFS Alaska Region (907) 271–5006; Kaja Brix, NMFS, Alaska Region, (907) 586–7235; or Marta Nammack, (301) 713–1401, ext. 180. The final rule, references, and other materials relating to this determination can be found on our website at *http://www.fakr.noaa.gov/*.

**SUPPLEMENTARY INFORMATION:**

### Background

On December 27, 2006, we published a proposed rule (71 FR 77694) to list the North Pacific right whale (*Eubalaena japonica*) as an endangered species pursuant to the Endangered Species Act (ESA) (16 U.S.C. 1531 *et seq.*), and we listed this species as endangered on March 6, 2008 (73 FR 12024). On October 29, 2007, we published a proposed rule (72 FR 61089) to designate critical habitat for the North Pacific right whale. We proposed the same two areas that we had previously designated as critical habitat for the northern right whale in the North Pacific Ocean (71 FR 38277, July 6, 2006). We now designate these same areas as critical habitat for the North Pacific right whale. A description of, and the basis for, the designation follows.

### Critical Habitat Designations Under the ESA

Section 3 of the ESA defines critical habitat as ''(i) the specific areas within the geographical area occupied by the species, at the time it is listed . . . on which are found those physical or biological features (I) essential to the conservation of the species and which may require special management considerations or protection; and (II) specific areas outside the geographical area occupied by the species at the time it is listed upon a determination by the Secretary to be essential for the conservation of the species.'' Section 3 of the ESA (16 U.S.C. 1532(3)) also defines the terms ''conserve,'' ''conserving,'' and ''conservation'' to mean ''to use, and the use of, all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.''

In determining what areas meet the definition of critical habitat, 50 CFR 424.12(b) requires that we ''consider those physical or biological features that are essential to the conservation of a given species including space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, and rearing of offspring; and habitats that are protected from disturbance or are representative of the historical geographical and ecological distribution of a species.'' The regulations refine our task by directing us to ''focus on the principal biological or physical