

Louisiana Shrimp Fishery Improvement Plan – Sea Turtles

Several protected species are found in Louisiana waters, including five species of sea turtles. These protected resources are regulated by the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration (Table 1). Although Louisiana waters are widely accepted as a foraging area for sea turtles, little or no nesting occurs on the beaches.

Species Common Name	Scientific Name	Endangered Species Act Status
Loggerhead sea turtle	<i>Caretta caretta</i>	Threatened
Green sea turtle	<i>Chelonia mydas</i>	Threatened
Kemp's Ridley sea turtle	<i>Lepidochelys kempii</i>	Endangered
Leatherback sea turtle	<i>Dermochelys coriacea</i>	Endangered
Hawksbill sea turtle	<i>Eretmochelys imbricata</i>	Endangered

Table 1. Protected sea turtles that interact with commercial fishermen in the Gulf of Mexico.

NOAA Fisheries shares jurisdiction with the USFWS for recovery and conservation of sea turtles listed under the Endangered Species Act and leads the conservation and recovery of sea turtles in the marine environment. USFWS is the lead agency on land.

NOAA and USFWS conservation and recovery efforts include:

- Enforcement of ESA regulations (TED laws, handling)
- Providing Section 7 permits for research
- Recovery Plans
- Biological Opinions
- Mandatory Observer Program
- TED testing
- Protection of sea turtle nesting grounds and nests

Louisiana provides information to NOAA, including:

- Strandings data
- Commercial shrimpers assisted through voluntary observer programs (pre 2007)
- Assisting federal agents with boardings in LA waters

GSMFC provided information and assistance:

- Funded Kemp's ridley stock assessment
- Funded protection of Kemp's ridley nesting grounds in 2014

Sea Turtle Conservation Laws

Federal law requires that shrimpers fishing with otter trawls in the Gulf of Mexico, including Louisiana, equip them with Turtle Excluder Devices (TEDs). This requirement includes an exemption for skimmer nets, butterfly (wing) nets, and pusher-head trawls. In lieu of TEDs, shrimpers fishing with these gears must limit the time they tow their nets (75 minutes from November 1 through March 31 and 55 minutes from April 1 through October 31). These regulations apply to Louisiana state waters and federal waters in the Gulf of Mexico, as well as state waters of the other Gulf states. See Appendix A for regulations applying to sea turtles.

The U.S. Coast Guard (USCG) and NOAA Fisheries Office of Law Enforcement ensure shrimpers comply with TED regulations in all waters through outreach to shrimpers before the shrimp season begins and enforcement patrols during the season. For example, from October 2011 to December 2012, NOAA agents inspected 187 shrimp vessels in Louisiana waters and found 41 TED-related violations, only ten of which were serious (see Appendix B). Violations range from minor, such as a mismeasurement, which present a very low risk to sea turtles to more severe such as improper use or not using a TED at all; the degree of punishment directly relates to the type of violation. Ten of the 41 violations warranted action beyond a verbal or written warning (i.e. a fishing violation), meaning that of the vessels inspected, 78 percent were fully compliant with TED regulations and only around five percent had serious compliance issues. In 2013, the USCG boarded 58 vessels in Louisiana waters and found no TED violations and only one Bycatch Reduction Device (BRD) violation, meaning 100 percent of the USCG inspected vessels were compliant with TED regulations. Furthermore, Louisiana has 192 enforcement agents statewide that have State and Federal law enforcement powers. As part of regular patrols and task force actions, Louisiana's enforcement agents regularly board vessels shrimping in Louisiana's inshore, nearshore, and offshore waters, both on the water and dockside, to check compliance to all laws. When they observe a TED-related violation, they summon USCG or NOAA agents to take action. Appendix B contains enforcement records from NOAA OLE and the USCG.

Sea Turtle Strandings

The Sea Turtle Stranding and Salvage Network (STSSN) collects information on strandings along the coasts of Louisiana. The network is mostly comprised of government employees (federal, state, parish) and private partners. Strandings throughout the region are reported to a state coordinator and thoroughly documented when possible. Data collected includes physical measurements, location found, state of disposition, species and date.

According to the 2012 Draft Environmental Impact Statement to Reduce Incidental Bycatch and Mortality of Sea Turtles in the Southeastern U.S. Shrimp Fisheries on Incidental Catch and Mortality of Sea Turtles (DEIS), "Sea turtle strandings occur due to a variety of reasons, including disease, exposure to biotoxins or pollutants, ingestion of marine debris, vessel collisions, and fishery interactions" (NMFS 2012)

During 2010 and 2011, NOAA Fisheries (via the STSSN) documented elevated sea turtle strandings in the Northern Gulf of Mexico, particularly throughout the Mississippi Sound area. According to the 2012 DEIS on Incidental Catch and Mortality of Sea Turtles, "Ultimately, NOAA Fisheries does not have data that provides a

definitive answer for the cause of the elevated sea turtle strandings in the Northern Gulf of Mexico that occurred in 2010 and 2011.”

According to the DEIS, explanations for elevated sea turtle strandings may include the following: 1) increased STSSN effort; 2) effects of the Deepwater Horizon oil spill event; 3) increased sea turtle abundance (i.e., Kemp’s ridley sea turtles) based on increased nesting numbers; 4) incidental bycatch in shrimp trawls; 5) and/or some other unknown cause.

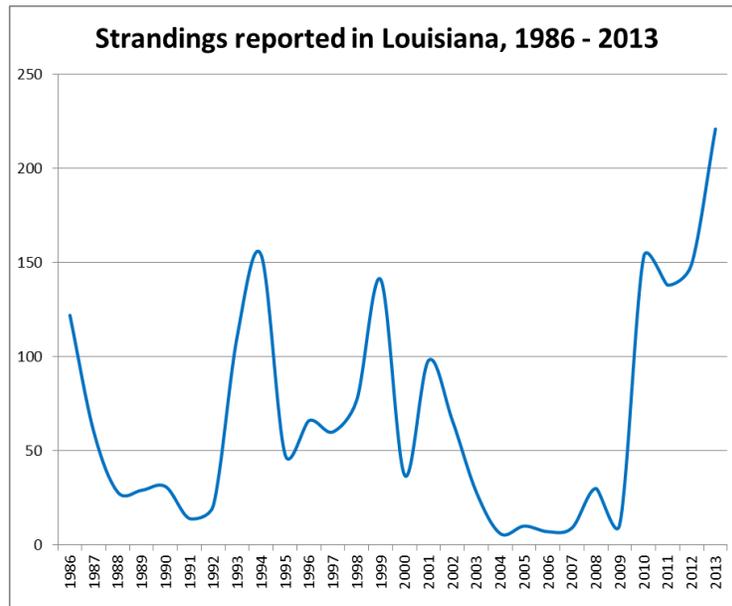


Figure 1. Strandings data (NOAA, 2013) (not all data has been verified).

Strandings information can be located on NOAA fisheries website, including data forms used in the field:

<http://www.sefsc.noaa.gov/species/turtles/strandings.htm>

Population Status of Kemp’s Ridley Sea Turtles

Kemp’s ridley sea turtles are predominantly found in the Gulf of Mexico. Scientists gauge the population by the number of nests located in their primary nesting areas in Mexico and Texas. According to the 2012 Biological Opinion from NOAA, Kemp’s ridley populations were increasing through 2012 and could have met criteria for delisting from the Endangered Species Act (NMFS 2012a), however preliminary data from 2014 and nesting numbers from 2013 indicate a large decline in number of nests and hatchlings. A report to the Gulf of Mexico Fishery Management Council suggests the recent decline is related to reduced prey resources which may affect nesting frequency; other ideas include losses of adults and sub-adults in the population due to the Deepwater Horizon oil spill or some other factor (Gallaway 2014).

The number of Kemp’s ridley sea turtle nests as documented on the main nesting grounds increased from 924 nests in 1978 to 16,385 in 2013 (Appendix C). The number of hatchlings documented on the primary nesting beaches also increased substantially during the same time period. In 1978, biologists documented 48,009 Kemp’s ridley hatchlings on Mexican beaches; they documented 755,428 hatchlings in 2013. These increases occurred during the years before and after TED laws were created and while NOAA and the USCG regularly

enforced TEDs in Gulf waters. The increase in sea turtle nesting is likely caused by “elimination of direct harvest, nest protection, the use of TEDs, reduced trawling effort in Mexico and the U.S., and possibly other changes in vital rates.” (NMFS 2012a).

Protection of the Kemp’s ridley nesting grounds has been one of the most significant conservation actions taken to date and may have prevented this species from extinction. The U.S. Fish and Wildlife Service recently cut funding for this effort due to budgetary issues. The Gulf State Marine Fisheries Commission, an organization made up of the Directors of the fisheries management agencies of each of the Gulf States, recently voted to provide funding for the 2014 nesting season. Conservation efforts include protecting nests from predators, relocating eggs to guarded corals, collecting precise data on nesting numbers, protecting hatchling releases, and monitoring sea turtle strandings. Without these conservation efforts, the population of Kemp’s ridleys would likely decline rapidly.

In 2013, scientists released the Kemp’s Ridley Stock Assessment Project. According to the most recent figures from the report, there are an estimated 180,000 female Kemp’s ridley sea turtles (2+ years) in the Gulf of Mexico (Galloway, et al. 2013). As these numbers increase, interactions with sea turtles by fishermen, nautical traffic, dredge operations, and other commercial vessels may also increase. For example, according to NOAA’s 2012 Endangered Species Act - Section 7 Consultation Biological Opinion, “The likelihood and frequency of sea turtle exposure to shrimp trawls is in large part a function of the extent of spatial and temporal overlap of each turtle species and fishing effort...In general, the more abundant sea turtles are in a given area where and when fishing occurs, and the more fishing effort in that given area, the greater the likelihood and frequency that a sea turtle will be exposed to the gear.”

Shrimping Effort

Overall fishing effort has declined significantly in recent years. Federal permits are required for shrimp vessels in the federal waters of the Gulf of Mexico. From 2007 to 2012, federal permits decreased by 38%, from 2,385 to 1,465; approximately 1,225 of these federal permits are active (NMFS 2012a).

The Louisiana trip ticket program collects information regarding catch for each commercial fishing trip. In 2000, Louisiana recorded 112,408 inshore shrimp trips, which decreased to 48,246 trips in 2013. Offshore trips have decreased as well, from 13,032 trips in 2000 to 3551 trips in 2013. In Louisiana, fishermen are required to have licenses for the fishing gear they use (e.g. a license for each shrimp trawl, a license for each skimmer net, etc.). Louisiana keeps records of these gear license sales. Sales of shrimp trawl licenses have dropped from 9,591 in 2000 to 3,639 in 2012. Sales of skimmer net licenses have dropped from 7,532 in 2000 to 6,670 in 2012 (LDWF).

Works Cited

Gallaway, B. J. and William J. Gazey. 2014. Evaluation of the Status of the Kemp's Ridley Sea Turtle Following the 2010 Deepwater Horizon Oil Spill Using a Revised Assessment Model. Gulf of Mexico Fishery Management Council, Tampa, Florida.

Gallaway, B. J., Caillouet, J. C., Plotkin, P. T., Gazey, W. J., Cole, J. G., & Raborn, S. W. (2013). Kemp's Ridley Stock Assessment Project. Gulf States Marine Fisheries Commission, Ocean Springs, Mississippi.

LDWF. Louisiana Department of Wildlife and Fisheries. Retrieved November 6, 2014, from Statistics: <http://www.wlf.louisiana.gov/licenses/statistics>

NMFS. 2012. Draft Environmental Impact Statement to Reduce Incidental Bycatch and Mortality of Sea Turtles in the Southeastern U.S. Shrimp Fisheries. NMFS, SERO, Protected Resource Division.

NMFS. 2012a. Reinitiation of Endangered Species Act (ESA) Section 7 Consultation on the Continued Implementation of the Sea Turtle Conservation Regulations, as Proposed to Be Amended, and the Continued Authorization of the Southeast U.S. Shrimp Fisheries in Federal Waters under the Magnuson-Stevens Act. Biological Opinion. NOAA, NMFS, SERO, Protected Resources Division and Sustainable Fisheries Division.

NOAA. (2013, October). NOAA Southeast Fisheries Science Center. Retrieved November 6, 2014, from Sea Turtle Strandings and Salvage Network: <http://www.sefsc.noaa.gov/species/turtles/strandings.htm>

APPENDIX A

50 CFR 223.205 **Sea turtles.**

(a) The prohibitions of section 9 of the Act (16 U.S.C. 1538) relating to endangered species apply to threatened species of sea turtle, except as provided in §223.206.

(b) Except as provided in §223.206, it is unlawful for any person subject to the jurisdiction of the United States to do any of the following:

(1) Own, operate, or be on board a vessel, except if that vessel is in compliance with all applicable provisions of §223.206(d);

(2) Fish for, catch, take, harvest, or possess, fish or wildlife while on board a vessel, except if that vessel is in compliance with all applicable provisions of §223.206(d);

(3) Fish for, catch, take, harvest, or possess, fish or wildlife contrary to any notice of tow-time or other restriction specified in, or issued under, §223.206(d)(3) or (d)(4);

(4) Possess fish or wildlife taken in violation of paragraph (b) of this section;

(5) Fail to follow any of the sea turtle handling and resuscitation requirements specified in §223.206(d)(1);

(6) Possess a sea turtle in any manner contrary to the handling and resuscitation requirements of §223.206(d)(1);

(7) Fail to comply immediately, in the manner specified at §600.730 (b) through (d) of this Title, with instructions and signals specified therein issued by an authorized officer, including instructions and signals to haul back a net for inspection;

(8) Refuse to allow an authorized officer to board a vessel, or to enter an area where fish or wildlife may be found, for the purpose of conducting a boarding, search, inspection, seizure, investigation, or arrest in connection with enforcement of this section;

(9) Destroy, stave, damage, or dispose of in any manner, fish or wildlife, gear, cargo, or any other matter after a communication or signal from an authorized officer, or upon the approach of such an officer or of an enforcement vessel or aircraft, before the officer has an opportunity to inspect same, or in contravention of directions from the officer;

(10) Assault, resist, oppose, impede, intimidate, threaten, obstruct, delay, prevent, or interfere with an authorized officer in the conduct of any boarding, search, inspection, seizure, investigation, or arrest in connection with enforcement of this section;

(11) Interfere with, delay, or prevent by any means, the apprehension of another person, knowing that such person committed an act prohibited by this section;

(12) Resist a lawful arrest for an act prohibited by this section;

(13) Make a false statement, oral or written, to an authorized officer or to the agency concerning the fishing for, catching, taking, harvesting, landing, purchasing, selling, or transferring fish or wildlife, or concerning any other matter subject to investigation under this section by such officer, or required to be submitted under this part 223;

(14) Sell, barter, trade or offer to sell, barter, or trade, a TED that is not an approved TED;

(15) Fail to comply with the restrictions set forth in §223.206(d)(10) regarding pound net leaders;

(16) Set, use, or fail to remove a pound net leader in Pound Net Regulated Area I or Pound Net Regulated Area II at any time from May 6 through July 15 that does not meet the leader construction specifications described in 50 CFR 223.206(d)(10) and 50 CFR 222.102;

(17) Set, use, or haul a modified pound net leader in Pound Net Regulated Area I or Pound Net Regulated Area II defined in 50 CFR 222.102 and referenced in 50 CFR 223.206(d)(10) at any time from May 6 through July 15 unless that leader has been inspected and tagged by NMFS in accordance with 50 CFR 223.206(d)(10)(vii) prior to deploying the leader;

(18) Alter or replace any portion of a pound net leader that has been previously tagged by NMFS in accordance with 50 CFR 223.206(d)(10)(vii) so that the altered or replaced portion is no longer consistent with the modified pound net leader definition in 50 CFR 222.102, unless that altered or replaced portion is inspected and tagged by NMFS in accordance with 50 CFR 223.206(d)(10)(vii) or that alteration or replacement occurs after the regulated period of May 6 through July 15;

(19) Remove, transfer, sell, purchase, affix, or tamper with any tags used by NMFS to mark pound net leaders;

(20) Fish, use, or haul a modified pound net leader at any time from May 6 through July 15 unless the fisherman has on board the vessel a letter issued by NMFS indicating that the leader has passed inspection;

(21) Fail to comply with the restrictions set forth in §223.206(d)(11) regarding sea scallop dredges; or

(22) Attempt to do, solicit another to do, or cause to be done, any of the foregoing.

(c) In connection with any action alleging a violation of this section, any person claiming the benefit of any exemption, exception, or permit under this subpart B has the burden of proving that the exemption, exception, or permit is applicable, was granted, and was valid and in force at the time of the alleged violation. Further, any person claiming that a modification made to a TED that is the subject of such an action complies with the requirements of §223.207 (c) or (d) has the burden of proving such claim.

[64 FR 14069, Mar. 23, 1999, as amended at 67 FR 41203, June 17, 2002; 69 FR 25012, May 5, 2004; 71 FR 50372, Aug. 25, 2006; 73 FR 68354, Nov. 18, 2008]

50 CFR 223.206 Exceptions to prohibitions relating to sea turtles.

(a) Permits—(1) Scientific research, education, zoological exhibition, or species enhancement permits. The Assistant Administrator may issue permits authorizing activities which would otherwise be prohibited under §223.205(a) for scientific or educational purposes, for zoological exhibition, or to enhance the propagation or survival of threatened species of sea turtles, in accordance with and subject to the conditions of part 222, subpart C—General Permit Procedures.

(2) Incidental-take permits. The Assistant Administrator may issue permits authorizing activities that would otherwise be prohibited under §223.205(a) in accordance with section 10(a)(1)(B) of the Act (16 U.S.C. 1539(a)(1)(B)), and in accordance with, and subject to, the implementing regulations in part 222 of this chapter. Such permits may be issued for the incidental taking of threatened and endangered species of sea turtles.

(b) Exception for injured, dead, or stranded specimens. If any member of any threatened species of sea turtle is found injured, dead, or stranded, any agent or employee of the National Marine Fisheries Service, the Fish and Wildlife Service, the U.S. Coast Guard, or any other Federal land or water management agency, or any agent or employee of a state agency responsible for fish and wildlife who is designated by his or her agency for such purposes, may, when acting in the course of his or her official duties, take such specimens without a permit if such taking is necessary to aid a sick, injured, or stranded specimen or dispose of a dead specimen or salvage a dead specimen which may be useful for scientific study. Whenever possible, live specimens shall be returned to their aquatic environment as soon as possible. Every action shall be reported in writing to the Assistant Administrator within 30 days, and reports of further occurrence shall be made as deemed appropriate by the Assistant Administrator until the specimen is either returned to its environment or disposed of. Reports shall be mailed by registered or certified mail, return receipt requested, to the Assistant Administrator and shall contain the following information:

(1) Name and position of the official or employee involved;

(2) Description of the specimen(s) involved;

(3) Date and location of disposal;

(4) Circumstances requiring the action;

(5) Method of disposal;

(6) Disposition of the specimen(s), including, where the specimen(s) has been retained in captivity, a description of the place and means of confinement, and the measures taken for its maintenance and care; and

(7) Such other information as the Assistant Administrator may require.

(c) Exception for research or conservation. Any employee or agent of the National Marine Fisheries Service, the Fish and Wildlife Service, or a state fish and wildlife agency operating a conservation program pursuant to the terms of a Cooperative Agreement with the National Marine Fisheries Service or the Fish and Wildlife Service in accordance with section 6(c) of the Act, designated by his or her agency for such purposes, may, when acting in the course of his or her official duties, take any threatened species to carry out scientific research or conservation programs. All such takings shall be reported within 30 days of the taking to the Assistant Administrator who may request additional reports of the taking and research at the Assistant Administrator's discretion.

(d) Exception for incidental taking. The prohibitions against taking in §223.205(a) do not apply to the incidental take of any member of a threatened species of sea turtle (i.e., a take not directed towards such member) during fishing or scientific research activities, to the extent that those involved are in compliance with all applicable requirements of paragraphs (d)(1) through (d)(11) of this section, or in compliance with the terms and conditions of an incidental take permit issued pursuant to paragraph (a)(2) of this section.

(1) Handling and resuscitation requirements. (i) Any specimen taken incidentally during the course of fishing or scientific research activities must be handled with due care to prevent injury to live specimens, observed for activity, and returned to the water according to the following procedures:

(A) Sea turtles that are actively moving or determined to be dead as described in paragraph (d)(1)(i)(C) of this section must be released over the stern of the boat. In addition, they must be released only when fishing or scientific collection gear is not in use, when the engine gears are in neutral position, and in areas where they are unlikely to be recaptured or injured by vessels.

(B) Resuscitation must be attempted on sea turtles that are comatose, or inactive, as determined in paragraph (d)(1) of this section, by:

(1) Placing the turtle on its bottom shell (plastron) so that the turtle is right side up and elevating its hindquarters at least 6 inches (15.2 cm) for a period of 4 up to 24 hours. The amount of the elevation depends on the size of the turtle; greater elevations are needed for larger turtles. Periodically, rock the turtle gently left to right and right to left by holding the outer edge of the shell (carapace) and lifting one side about 3 inches (7.6 cm) then alternate to the other side. Gently touch the eye and pinch the tail (reflex test) periodically to see if there is a response.

(2) Sea turtles being resuscitated must be shaded and kept damp or moist but under no circumstance be placed into a container holding water. A water-soaked towel placed over the head, carapace, and flippers is the most effective method in keeping a turtle moist.

(3) Sea turtles that revive and become active must be released over the stern of the boat only when fishing or scientific collection gear is not in use, when the engine gears are in neutral position, and in areas where they are unlikely to be recaptured or injured by vessels. Sea turtles that fail to respond to the reflex test or fail to move

within 4 hours (up to 24, if possible) must be returned to the water in the same manner as that for actively moving turtles.

(C) A turtle is determined to be dead if the muscles are stiff (rigor mortis) and/or the flesh has begun to rot; otherwise the turtle is determined to be comatose or inactive and resuscitation attempts are necessary.

(ii) In addition to the provisions of paragraph (d)(1)(i) of this section, a person aboard a vessel in the Atlantic, including the Caribbean Sea and the Gulf of Mexico, that has pelagic or bottom longline gear on board and that has been issued, or is required to have, a limited access permit for highly migratory species under §635.4 of this title, must comply with the handling and release requirements specified in §635.21 of this title.

(iii) Any specimen taken incidentally during the course of fishing or scientific research activities must not be consumed, sold, landed, offloaded, transshipped, or kept below deck.

(2) Gear requirements for trawlers—(i) TED requirement for shrimp trawlers. Any shrimp trawler that is in the Atlantic Area or Gulf Area must have an approved TED installed in each net that is rigged for fishing. A net is rigged for fishing if it is in the water, or if it is shackled, tied, or otherwise connected to any trawl door or board, or to any tow rope, cable, pole or extension, either on board or attached in any manner to the shrimp trawler. Exceptions to the TED requirement for shrimp trawlers are provided in paragraph (d)(2)(ii) of this section.

(ii) Exemptions from the TED requirement—(A) Alternative tow-time restrictions. A shrimp trawler is exempt from the TED requirements of paragraph (d)(2)(i) of this section if it complies with the alternative tow-time restrictions in paragraph (d)(3)(i) of this section and if it:

(1) Has on board no power or mechanical-advantage trawl retrieval system (i.e., any device used to haul any part of the net aboard);

(2) Is a bait shrimper that retains all live shrimp on board with a circulating seawater system, if it does not possess more than 32 lb. (14.5 kg) of dead shrimp on board, if it has a valid original state bait-shrimp license, and if the state license allows the licensed vessel to participate in the bait shrimp fishery exclusively;

(3) Has only a pusher-head trawl, skimmer trawl, or wing net rigged for fishing;

(4) Is in an area during a period for which tow-time restrictions apply under paragraphs (d)(3)(ii) or (iii) of this section, if it complies with all applicable provisions imposed under those paragraphs; or

(5) Is using a single test net (try net) with a headrope length of 12 ft (3.6 m) or less and with a footrope length of 15 ft (4.6 m) or less, if it is pulled immediately in front of another net or is not connected to another net in any way, if no more than one test net is used at a time, and if it is not towed as a primary net, in which case the exemption under this paragraph (d)(2)(ii)(A) applies to the test net.

(B) Exempted gear or activities. The following fishing gear or activities are exempted from the TED requirements of paragraph (d)(2)(i) of this section:

(1) A beam or roller trawl, if the frame is outfitted with rigid vertical bars, and if none of the spaces between the bars, or between the bars and the frame, exceeds 4 inches (10.2 cm); and

(2) A shrimp trawler fishing for, or possessing, royal red shrimp, if royal red shrimp constitutes at least 90 percent (by weight) of all shrimp either found on board, or offloaded from that shrimp trawler.

(iii) Gear requirement—summer flounder trawlers—(A) TED requirement. (1) Any summer flounder trawler in the summer flounder fishery-sea turtle protection area must have an approved TED installed in each net that is rigged for fishing. A net is rigged for fishing if it is in the water, or if it is shackled, tied, or otherwise connected to any trawl door or board, or to any tow rope, cable, pole or extension, either on board or attached in any manner to the summer flounder trawler. Exceptions to the TED requirement for summer flounder trawlers are provided in paragraph (d)(2)(iii)(B) of this section.

(2) Any approved hard TED or special hard TED installed in a summer flounder trawl must be installed in a TED extension. The TED extension is a cylindrical piece of webbing distinct from the main trawl's body, wings, codend, and any other net extension(s). The TED extension must be constructed of webbing no larger than 3.5 inch (8.9 cm) stretched mesh. The TED extension must extend at least 24 inches (61.0 cm) but not more than 36 inches (91.4 cm) forward of the leading edge of the TED and aft of the trailing edge of the grid.

(B) Exemptions from the TED requirement. Any summer flounder trawler north of 35°46.1' N. lat. (Oregon Inlet, NC) from January 15 through March 15 annually is exempt from the TED requirement of paragraph (d)(2)(iii)(A) of this section, unless the Assistant Administrator determines that TED use is necessary to protect sea turtles or ensure compliance, pursuant to the procedures of paragraph (d)(4) of this section.

(C) Monitoring. Summer flounder trawlers must carry onboard a NMFS-approved observer if requested by the Southeast Regional Administrator or the Northeast Regional Administrator. A written notification will be sent to the address specified for the vessel in either the NMFS or state fishing permit application, or to the address specified for registration or documentation purposes, or upon written notification otherwise served on the owner or operator of the vessel. Owners and operators must comply with the terms and conditions specified in such written notification. All NMFS-approved observers will report any violations of this section, or other applicable regulations and laws. Information collected by observers may be used for enforcement purposes.

(D) Additional sea turtle conservation measures. The Assistant Administrator may impose other such restrictions upon summer flounder trawlers as the Assistant Administrator deems necessary or appropriate to protect sea turtles and ensure compliance, pursuant to the procedures of paragraph (d)(4) of this section. Such measures may include, but are not limited to, a requirement to use TEDs in areas other than summer flounder fishery-sea turtle protection area, a requirement to use limited tow-times, and closure of the fishery.

(3) Tow-time restrictions—(i) Duration of tows. If tow-time restrictions are utilized pursuant to paragraph (d)(2)(ii), (d)(3)(ii), or (d)(3)(iii) of this section, a shrimp trawler must limit tow times. The tow time is measured from the time that the trawl door enters the water until it is removed from the water. For a trawl that is

not attached to a door, the tow time is measured from the time the codend enters the water until it is removed from the water. Tow times may not exceed:

(A) 55 minutes from April 1 through October 31; and

(B) 75 minutes from November 1 through March 31.

(ii) Alternative—special environmental conditions. The Assistant Administrator may allow compliance with tow-time restrictions, as an alternative to the TED requirement of paragraph (d)(2)(i) of this section, if the Assistant Administrator determines that the presence of algae, seaweed, debris or other special environmental conditions in a particular area makes trawling with TED-equipped nets impracticable.

(iii) Substitute—ineffectiveness of TEDs. The Assistant Administrator may require compliance with tow-time restrictions, as a substitute for the TED requirement of paragraph (d)(2)(i) of this section, if the Assistant Administrator determines that TEDs are ineffective in protecting sea turtles.

(iv) Notice; applicability; conditions. The Assistant Administrator will publish notification concerning any tow-time restriction imposed under paragraph (d)(3)(ii) or (iii) of this section in the Federal Register and will announce it in summary form on channel 16 of the marine VHF radio. A notification of tow-time restrictions will include findings in support of these restrictions as an alternative to, or as substitute for, the TED requirements. The notification will specify the effective dates, the geographic area where tow-time restrictions apply, and any applicable conditions or restrictions that the Assistant Administrator determines are necessary or appropriate to protect sea turtles and ensure compliance, including, but not limited to, a requirement to carry observers, to register vessels in accordance with procedures at paragraph (d)(5) of this section, or for all shrimp trawlers in the area to synchronize their tow times so that all trawl gear remains out of the water during certain times. A notification withdrawing tow-time restrictions will include findings in support of that action.

(v) Procedures. The Assistant Administrator will consult with the appropriate fishery officials (state or Federal) where the affected shrimp fishery is located in issuing a notification concerning tow-time restrictions. An emergency notification can be effective for a period of up to 30 days and may be renewed for additional periods of up to 30 days each if the Assistant Administrator finds that the conditions necessitating the imposition of tow-time restrictions continue to exist. The Assistant Administrator may invite comments on such an action, and may withdraw or modify the action by following procedures similar to those for implementation. The Assistant Administrator will implement any permanent tow-time restriction through rulemaking.

(4) Limitations on incidental takings during fishing activities—(i) Limitations. The exemption for incidental takings of sea turtles in paragraph (d) of this section does not authorize incidental takings during fishing activities if the takings:

(A) Would violate the restrictions, terms, or conditions of an incidental take statement or biological opinion;

(B) Would violate the restrictions, terms, or conditions of an incidental take permit; or

(C) May be likely to jeopardize the continued existence of a species listed under the Act.

(ii) Determination; restrictions on fishing activities. The Assistant Administrator may issue a determination that incidental takings during fishing activities are unauthorized. Pursuant thereto, the Assistant Administrator may restrict fishing activities in order to conserve a species listed under the Act, including, but not limited to, restrictions on the fishing activities of vessels subject to paragraph (d)(2) of this section. The Assistant Administrator will take such action if the Assistant Administrator determines that restrictions are necessary to avoid unauthorized takings that may be likely to jeopardize the continued existence of a listed species. The Assistant Administrator may withdraw or modify a determination concerning unauthorized takings or any restriction on fishing activities if the Assistant Administrator determines that such action is warranted.

(iii) Notice; applicability; conditions. The Assistant Administrator will publish a notification of a determination concerning unauthorized takings or a notification concerning the restriction of fishing activities in the Federal Register. The Assistant Administrator will provide as much advance notice as possible, consistent with the requirements of the Act, and will announce the notification in summary form on channel 16 of the marine VHF radio. Notification of a determination concerning unauthorized takings will include findings in support of that determination; specify the fishery, including the target species and gear used by the fishery, the area, and the times, for which incidental takings are not authorized; and include such other conditions and restrictions as the Assistant Administrator determines are necessary or appropriate to protect sea turtles and ensure compliance. Notification of restriction of fishing activities will include findings in support of the restriction, will specify the time and area where the restriction is applicable, and will specify any applicable conditions or restrictions that the Assistant Administrator determines are necessary or appropriate to protect sea turtles and ensure compliance. Such conditions and restrictions may include, but are not limited to, limitations on the types of fishing gear that may be used, tow-time restrictions, alteration or extension of the periods of time during which particular tow-time requirements apply, requirements to use TEDs, registration of vessels in accordance with procedures at paragraph (d)(5) of this section, and requirements to provide observers. Notification of withdrawal or modification will include findings in support of that action.

(iv) Procedures. The Assistant Administrator will consult with the appropriate fisheries officials (state or Federal) where the fishing activities are located in issuing notification of a determination concerning unauthorized takings or notification concerning the restriction of fishing activities. An emergency notification will be effective for a period of up to 30 days and may be renewed for additional periods of up to 30 days each, except that emergency placement of observers will be effective for a period of up to 180 days and may be renewed for an additional period of 60 days. The Assistant Administrator may invite comments on such action, and may withdraw or modify the action by following procedures similar to those for implementation. The Assistant Administrator will implement any permanent determination or restriction through rulemaking.

(5)-(6) [Reserved]

(7) Restrictions applicable to gillnet fisheries in North Carolina. No person may fish with gillnet fishing gear which has a stretched mesh size larger than 4 1/4 inches (10.8 cm), annually from September 1 through December 15, in the inshore waters of Pamlico Sound, North Carolina, and all contiguous tidal waters, bounded on the north by 35°46.3' N. lat., on the south by 35°00' N. lat., and on the west by 76°30' W. long.

(8) Restrictions applicable to large mesh gillnet fisheries in the mid-Atlantic region. No person may fish with or possess on board a boat, any gillnet with a stretched mesh size 7-inches (17.8 cm) or larger, unless such gillnets are covered with canvas or other similar material and lashed or otherwise securely fastened to the deck or the rail, and all buoys larger than 6-inches (15.2 cm) in diameter, high flyers, and anchors are disconnected. This restriction applies in the Atlantic Exclusive Economic Zone (as defined in 50 CFR 600.10) during the following time periods and in the following area:

(i) Waters north of 33°51.0' N. (North Carolina/South Carolina border at the coast) and south of 35°46.0' N. (Oregon Inlet) at any time;

(ii) Waters north of 35°46.0' N. (Oregon Inlet) and south of 3°22.5' N. (Currituck Beach Light, NC) from March 16 through January 14;

(iii) Waters north of 36°22.5' N. (Currituck Beach Light, NC) and south of 37°34.6' N. (Wachapreague Inlet, VA) from April 1 through January 14; and

(iv) Waters north of 37°34.6' N. (Wachapreague Inlet, VA) and south of 37°56.0' N. (Chincoteague, VA) from April 16 through January 14.

(9) Restrictions applicable to Pacific pelagic longline vessels. In addition to the general prohibitions specified in §600.725 of chapter VI of this title, it is unlawful for any person who is not operating under a western Pacific longline permit under §665.801 of this title to do any of the following on the high seas of the Pacific Ocean east of 150° W. long. and north of the Equator (0° N. lat.):

(i) Direct fishing effort toward the harvest of swordfish (*Xiphias gladius*) using longline gear.

(ii) Possess a light stick on board a longline vessel. A light stick as used in this paragraph is any type of light emitting device, including any fluorescent glow bead, chemical, or electrically powered light that is affixed underwater to the longline gear.

(iii) An operator of a longline vessel subject to this section may land or possess no more than 10 swordfish from a fishing trip where any part of the trip included fishing east of 150° W. long. and north of the equator (0° N. lat.).

(iv) Fail to employ basket-style longline gear such that the mainline is deployed slack when fishing.

(v) When a conventional monofilament longline is deployed by a vessel, no fewer than 15 branch lines may be set between any two floats. Vessel operators using basket-style longline gear must set a minimum of 10 branch lines between any 2 floats.

(vi) Longline gear must be deployed such that the deepest point of the main longline between any two floats, i.e., the deepest point in each sag of the main line, is at a depth greater than 100 m (328.1 ft or 54.6 fm) below the sea surface.

(10) Restrictions applicable to pound nets in Virginia—(i) Offshore pound net leaders in Pound Net Regulated Area I. During the time period of May 6 through July 15 each year, any offshore pound net leader in Pound Net Regulated Area I must meet the definition of a modified pound net leader. Any offshore pound net leader in Pound Net Regulated Area I that does not meet the definition of a modified pound net leader must be removed from the water prior to May 6 and may not be reset until July 16.

(ii) Nearshore pound net leaders in Pound Net Regulated Area I and all pound net leaders in Pound Net Regulated Area II. During the time period of May 6 to July 15 each year, any nearshore pound net leader in Pound Net Regulated Area I and any pound net leader in Pound Net Regulated Area II must have only mesh size less than 12 inches (30.5 cm) stretched mesh and may not employ stringers. Any nearshore pound net leader in Pound Net Regulated Area I or any pound net leader in Pound Net Regulated Area II with stretched mesh measuring 12 inches (30.5 cm) or greater, or with stringers, must be removed from the water prior to May 6 and may not be reset until July 16. A pound net leader is exempt from these measures only if it meets the definition of a modified pound net leader.

(iii) Protocol for measuring mesh size. This protocol applies to measuring mesh size in leaders described in 50 CFR 223.206(d)(10)(i) and 223.206(d)(10)(ii). Mesh sizes are measured by a wedge-shaped gauge having a taper of 0.79 in. (2 cm) in 3.15 in. (8 cm) and a thickness of 0.09 in. (2.3 mm) inserted into the meshes under a pressure or pull of 11.02 lb. (5 kg). The mesh size is the average of the measurement of any series of 20 consecutive meshes. The mesh in the leader is measured at or near the horizontal and vertical center of a leader panel.

(iv) Reporting requirement. At any time during the year, if a sea turtle is taken live and uninjured in a pound net operation, the operator of the vessel must report the incident to the NMFS Northeast Regional Office, (978) 281-9328 or fax (978) 281-9394, within 24 hours of returning from the trip in which the incidental take was discovered. The report shall include a description of the sea turtles condition at the time of release and the measures taken as required in paragraph (d)(1) of this section. At any time during the year, if a sea turtle is taken in a pound net operation, and is determined to be injured, or if a turtle is captured dead, the operator of the vessel shall immediately notify NMFS Northeast Regional Office and the appropriate rehabilitation or stranding network, as determined by NMFS Northeast Regional Office.

(v) Monitoring. Owners or operators of pound net fishing operations must allow access to the pound net gear so it may be observed by a NMFS-approved observer if requested by the Northeast Regional Administrator. All NMFS-approved observers will report any violations of this section, or other applicable regulations and laws. Information collected by observers may be used for law enforcement purposes.

(vi) Expedited modification of restrictions and effective dates. From May 6 to July 15 of each year, if NMFS receives information that one sea turtle is entangled alive or that one sea turtle is entangled dead, and NMFS determines that the entanglement contributed to its death, in pound net leaders that are in compliance with the

restrictions described in paragraph (d)(10)(ii) of this section, NMFS may issue a final rule modifying the restrictions on pound net leaders as necessary to protect threatened sea turtles. Such modifications may include, but are not limited to, reducing the maximum allowable mesh size of pound net leaders and prohibiting the use of pound net leaders regardless of mesh size. In addition, if information indicates that a significant level of sea turtle entanglements, impingements or strandings will likely continue beyond July 15, NMFS may issue a final rule extending the effective date of the restrictions, including any additional restrictions imposed under this paragraph (d)(10)(vi), for an additional 15 days, but not beyond July 30, to protect threatened sea turtles.

(vii) Modified leader inspection program. Any fisherman planning to use a modified pound net leader in Pound Net Regulated Area I or Pound Net Regulated Area II at any time from May 6 through July 15 must make his/her leader available for inspection and tagging by NMFS according to the following procedures. At least 72 hours prior to deploying a modified pound net leader, the fisherman or his/her representative must call NMFS at 757-414-0128 between 7:00 a.m. and 5:00 p.m. local time and arrange for a mutually agreeable meeting date, time, and place. The fisherman must meet NMFS at such location at the designated time and allow NMFS to examine his or her gear to help ensure the leader is in compliance with the definition of a modified pound net leader. NMFS will ascertain whether the leader meets the following four criteria taken from that definition: (1) the lower portion of the leader is mesh and the upper portion consists of only vertical lines; (2) the mesh size is equal to or less than 8 inches (20.3 cm) stretched mesh; (3) the vertical lines are equal to or greater than 5/16 inch (0.8 cm) in diameter and strung vertically at least every 2 feet (61 cm); and (4) the vertical lines are hard lay lines with a level of stiffness equivalent to the stiffness of a 5/16 inch (0.8 cm) diameter line composed of polyester wrapped around a blend of polypropylene and polyethylene and containing approximately 42 visible twists of strands per foot of line. NMFS will also measure the height of the mesh in relation to the height of the entire leader. During the inspection, the fisherman must provide accurate and specific latitude and longitude coordinates of the location at which the leader will be deployed, as well as information on the low water depth at each end of the modified leader at the site at which it will be set. If the leader meets the four criteria previously described, the measurement of the height of the mesh in relation to the total height of the leader is recorded, and the low water depth and latitude and longitude coordinates of the specific location at which the leader will be deployed are provided and recorded, the leader will pass inspection. If it passes inspection, NMFS will tag the leader with one or more tamperproof tags. Removing or tampering with any tag placed on the leader by NMFS is prohibited. If a tag is damaged, destroyed, or lost due to any cause, the fisherman must call NMFS at 757-414-0128 within 48 hours of discovery to report this incident. After the leader is determined to have passed inspection, NMFS will issue a letter to the fisherman indicating that the leader passed inspection. The fisherman must retain that letter on board his/her vessel tending the inspected leader at all times it is deployed. Modified pound net leaders must pass inspection prior to being used at any time during the time period from May 6 through July 15 of each year.

(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 vertical and horizontal chains must be hung to cover the opening of the

dredge bag such that the vertical chains extend from the back of the cutting bar to the sweep. The horizontal chains must intersect the vertical chains such that the length of each side of the openings formed by the intersecting chains is less than or equal to 14 inches (35.5 cm) with the exception of the side of any individual opening created by the sweep. 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.

[64 FR 14070, Mar. 23, 1999]

Editorial Note: For Federal Register citations affecting §223.206, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

Effective Date Notes: 1. At 64 FR 14070, Mar. 23, 1999, newly redesignated §223.206 was revised. Paragraph (d)(5) contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

2. At 67 FR 41203, June 17, 2002, §223.206 was amended by adding paragraph (d)(2)(v). Paragraph (d)(2)(v)(C) contains information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

50 CFR 223.207 **Approved TEDs.**

Any netting, webbing, or mesh that may be measured to determine compliance with this section is subject to measurement, regardless of whether it is wet or dry. Any such measurement will be of the stretched mesh size.

(a) Hard TEDs. Hard TEDs are TEDs with rigid deflector grids and are categorized as “hooped hard TEDs” and “single-grid hard TEDs” such as the Matagorda and Georgia TED (Figures 3 & 4 to this part). Hard TEDs complying with the following generic design criteria are approved TEDs:

(1) Construction materials—(i) Single-grid and inshore hooped hard TED. A single-grid hard TED or an inshore hooped hard TED must be constructed of one or a combination of the following materials, unless otherwise specifically restricted below, with minimum dimensions as follows:

(A) Solid steel rod with a minimum outside diameter of 1/4 inch (0.64 cm);

(B) Fiberglass or aluminum rod with a minimum outside diameter of 1/2 inch (1.27 cm); or

(C) Steel or aluminum round, oval, or rectangular tubing with a minimum outside diameter or width of 1/2 inch (1.27 cm) and a minimum wall thickness of 1/8 inch (0.32 cm); also known as schedule 40 tubing).

(D) Steel or aluminum flat bar with dimensions no less than 1/4 inch (0.64 cm) in thickness by 1 1/2 inches (3.85 cm) in depth. For flat bar less than 3/8 inch (0.95 cm) in thickness, a horizontal brace bar to reinforce the deflector bars must be permanently attached to the frame and the rear face of each of the deflector bars within 4 inches (10.2 cm) of the midpoint of the TED frame. The horizontal brace bar must be constructed of approved material consistent with paragraph (a)(1)(i) of this section. The horizontal brace bar may be offset behind the deflector bars, using spacer bars, not to exceed 5 inches (12.7 cm) in length and constructed of the same size or larger flat bar as the deflector bars.

(ii) Offshore hooped hard TED. An offshore hooped hard TED must be constructed of aluminum, with minimum dimensions as follows:

(A) Solid rod with a minimum outside diameter of 5/8 inch (1.59 cm); or

(B) Tubing with a minimum outside diameter of 1 inch (2.54 cm) and a minimum wall thickness of 1/8 inch (0.32 cm).

(2) Method of attachment. A hard TED must be sewn into the trawl around the entire circumference of the TED with heavy twine.

(3) Angle of deflector bars. (i) The angle of the deflector bars must be between 30° and 55° from the normal, horizontal flow through the interior of the trawl, except as provided in paragraph (a)(3)(ii) of this section.

(ii) For any shrimp trawler fishing in the Gulf SFSTCA or the Atlantic SFSTCA, a hard TED with the position of the escape opening at the bottom of the net when the net is in its deployed position, the angle of the deflector bars from the normal, horizontal flow through the interior of the trawl, at any point, must not exceed 55°, and the angle of the bottom-most 4 inches (10.2 cm) of each deflector bar, measured along the bars, must not exceed 45° (Figures 14a and 14b to this part).

(4) Space between bars. The space between deflector bars and the deflector bars and the TED frame must not exceed 4 inches (10.2 cm).

(5) Direction of bars. The deflector bars must run from top to bottom of the TED, as the TED is positioned in the net, except that up to four of the bottom bars and two of the top bars, including the frame, may run from side to side of the TED. The deflector bars must be permanently attached to the TED frame or to the horizontal bars, if used, at both ends.

(6) Position of the escape opening. The escape opening must be made by removing a rectangular section of webbing from the trawl, except for a TED with an escape opening size described at paragraph (a)(7)(ii)(A) for which the escape opening may alternatively be made by making a horizontal cut along the same plane as the TED. The escape opening must be centered on and immediately forward of the frame at either the top or bottom of the net when the net is in the deployed position. The escape opening must be at the top of the net when the slope of the deflector bars from forward to aft is upward, and must be at the bottom when such slope is downward. The passage from the mouth of the trawl through the escape opening must be completely clear of any obstruction or modification, other than those specified in paragraph (d) of this section.

(7) Size of escape opening—(i) Hooped hard TEDs—(A) Escape opening for inshore hooped hard TED. The inshore hooped hard TED escape opening must have a horizontal measurement of no less than 35 inches (89 cm) wide and a forward measurement of no less than 27 inches (69 cm). A hinged door frame may be used to partially cover the escape opening as provided in paragraph (d)(7) of this section. Alternatively, a webbing flap may be used as provided in paragraph (d)(3)(i) of this section. The resultant opening with a webbing flap must be a minimum width of 35 inches (89 cm) and a minimum height of 20 inches (51 cm), with each measurement taken simultaneously. This opening may only be used in inshore waters, except it may not be used in the inshore waters of Georgia and South Carolina.

(B) Escape opening for offshore hooped hard TED. The offshore hooped hard TED escape opening must have a horizontal measurement of no less than 40 inches (102 cm) wide and a forward measurement of no less than 35 inches (89 cm). A hinged door frame may be used to partially cover the escape opening as provided in paragraph (d)(7) of this section. Alternatively, a webbing flap may be used as provided in paragraph (d)(3)(ii) of this section. The resultant escape opening with a webbing flap must have a stretched mesh circumference of no less than 142 inches (361 cm).

(ii) Single-grid hard TEDs. On a single-grid hard TED, the horizontal cut(s) for the escape opening may not be narrower than the outside width of the TED frame minus 4 inches (10.2 cm) on both sides of the grid, when measured as a straight line width. Fore-and-aft cuts to remove a rectangular piece of webbing must be made from the ends of the horizontal cuts along a single row of meshes along each side. The overall size of the escape opening must match one of the following specifications:

(A) 44-inch inshore opening. The escape opening must have a minimum width of 44 inches (112 cm) and a minimum height of 20 inches (51 cm) with each measurement taken separately. A webbing flap, as described in paragraph (d)(3)(i) of this section, may be used with this escape hole, so long as this minimum opening size is achieved. This opening may only be used in inshore waters, except it may not be used in the inshore waters of Georgia and South Carolina.

(B) The 71-inch offshore opening: The two forward cuts of the escape opening must not be less than 26 inches (66 cm) long from the points of the cut immediately forward of the TED frame. The resultant length of the leading edge of the escape opening cut must be no less than 71 inches (181 cm) with a resultant circumference of the opening being 142 inches (361 cm) (Figure 12 to this part). A webbing flap, as described in paragraph (d)(3)(ii) of this section, may be used with this escape hole, so long as this minimum opening size is achieved.

Either this opening or the one described in paragraph (a)(7)(ii)(C) of this section must be used in all offshore waters and in all inshore waters in Georgia and South Carolina, but may also be used in other inshore waters.

(C) Double cover offshore opening. The two forward cuts of the escape opening must not be less than 20 inches (51 cm) long from the points of the cut immediately forward of the TED frame. The resultant length of the leading edge of the escape opening cut must be no less than 56 inches (142 cm)(Figure 16 to this part illustrates the dimensions of these cuts). A webbing flap, as described in paragraph (d)(3)(iii) of this section, may be used with this escape hole. Either this opening or the one described in paragraph (a)(7)(ii)(B) of this section must be used in all offshore waters but also in all inshore waters in Georgia and South Carolina, and may be used in other inshore waters.

(D) Boone Wedge Cut opening. (Figure 17 to this part). The escape opening is made by making two cuts in the TED extension; one cut is fore and aft (i.e., along the length of the extension) and the other cut is horizontal to the extension. The horizontal cut is 50 meshes long and begins at a point 4 inches (10.2 cm) inward from the outside edge of the grid on one side and runs to the same point on the opposite side of the grid. The fore and aft cut begins in the middle of the horizontal cut and runs forward 49.5 inches (125.7 cm) toward the front edge of the TED extension. The added wedge of webbing is attached along its two leading edges to the edges of the fore and aft cut. The webbing wedge is made of 17/8 inch (4.8 cm) webbing and must have at least 41 meshes measuring at least 72 inches wide (182.9 cm) along its base (aft edge). The height of the wedge must measure at least 48.5 inches (123 cm). The top of the wedge is two bars across the leading edge then cut with a 1 point then 6 bar taper. A webbing flap, as described in paragraph (d)(3)(iv) of this section, may be used with this escape opening, so long as the minimum opening size is achieved.

(E) Large TED openings. (Figures 18a, 18b, and 18c to this part). Large TED escape openings may be utilized in the following configurations:

(1) A triangular cut (Figure 18a to this part), where the base of the triangle is defined by a straight-line measurement of the opening between the webbing attachment points on the TED frame that is no less than 40 inches (102 cm). The two side cuts of the triangle must be an all-bar taper from the point at which the webbing attaches to the TED frame to the apex of the triangle cut. Each side cut of the triangle must measure no less than 53 inches (135 cm). The sum of the straight-line base measurement and two side cuts must be no less than 147 inches (373 cm). The side cuts of the triangular opening may be reinforced using rib lines attached from the TED frame to the apex of the opening. A webbing flap, as described in either paragraph (d)(3)(ii) or (d)(3)(iii) of this section, may be used with this escape opening, so long as the minimum opening size is achieved.

(2) All-bar or all-points side cuts and a horizontal leading edge cut (Figures 18b and 18c to this part), where the straight-line measurement of the opening between the webbing attachment points on the TED frame may not be less than 40 inches (102 cm), and the two side cuts of the escape opening must not be less than 26 inches (66 cm) long from the points of the cut immediately forward of the TED frame. Only all-bar or all-points side cuts may be used; no combination tapers may be used when making the side cuts. The sum of the straight-line base measurement and the stretched measurements of the side cuts and leading edge cut must be no less than 147 inches (373 cm). A webbing flap, as described in either paragraph (d)(3)(ii) or (d)(3)(iii) of this section, may be used with this escape opening, so long as the minimum opening size is achieved.

(8) Size of hoop or grid—(i) Hooped hard TED—(A) Inshore hooped hard TED. The front hoop on an inshore hooped hard TED must have an inside horizontal measurement of at least 35 inches (89 cm) and an inside vertical measurement of at least 30 inches (76 cm). The minimum clearance between the deflector bars and the forward edge of the escape opening must be at least 20 inches (51 cm).

(B) Offshore hooped hard TED. The front hoop on an offshore hooped hard TED must have an inside horizontal measurement of at least 40 inches (102 cm) and an inside vertical measurement of at least 30 inches (76 cm). The minimum clearance between the deflector bars and the forward edge of the escape opening must be at least 23¹/₄ inches (59 cm).

(ii) Single-grid hard TED. A single-grid hard TED must have a minimum outside horizontal and vertical measurement of 32 inches (81 cm). The required outside measurements must be at the mid-point of the deflector grid.

(9) Flotation. Floats must be attached to the top one-half of all hard TEDs with bottom escape openings. The floats may be attached either outside or inside the net, but not to a flap. Floats attached inside the net must be behind the rear surface of the TED. Floats must be attached with heavy twine or rope. Floats must be constructed of aluminum, hard plastic, expanded polyvinyl chloride, or expanded ethylene vinyl acetate unless otherwise specified. The requirements of this paragraph may be satisfied by compliance with either the dimension requirements of paragraph (a)(9)(i) of this section, or the buoyancy requirements of paragraph (a)(9)(ii) of this section, or the buoyancy-dimension requirements of paragraph (a)(9)(iii) of this section. If roller gear is used pursuant to paragraph (d)(5) of this section, the roller gear must be included in the circumference measurement of the TED or the total weight of the TED.

(i) Float dimension requirements. (A) For hard TEDs with a circumference of 120 inches (304.8 cm) or more, a minimum of either one round, aluminum or hard plastic float, no smaller than 9.8 inches (25.0 cm) in diameter, or two expanded polyvinyl chloride or expanded ethylene vinyl acetate floats, each no smaller than 6.75 inches (17.2 cm) in diameter by 8.75 inches (22.2 cm) in length, must be attached.

(B) For hard TEDs with a circumference of less than 120 inches (304.8 cm), a minimum of either one round, aluminum or hard plastic float, no smaller than 9.8 inches (25.0 cm) in diameter, or one expanded polyvinyl chloride or expanded ethylene vinyl acetate float, no smaller than 6.75 inches (17.2 cm) in diameter by 8.75 inches (22.2 cm) in length, must be attached.

(ii) Float buoyancy requirements. Floats of any size and in any combination must be attached such that the combined buoyancy of the floats, as marked on the floats, equals or exceeds the weight of the hard TED, as marked on the TED. The buoyancy of the floats and the weight of the TED must be clearly marked on the floats and the TED as follows:

(A) Float buoyancy markings. Markings on floats must be made in clearly legible raised or recessed lettering by the original manufacturer. The marking must identify the buoyancy of the float in water, expressed in grams or

kilograms, and must include the metric unit of measure. The marking may additionally include the buoyancy in English units. The marking must identify the nominal buoyancy for the manufactured float.

(B) TED weight markings. The marking must be made by the original TED manufacturer and must be permanent and clearly legible. The marking must identify the in-air, dry weight of the TED, expressed in grams or kilograms, and must include the metric unit of measure. The marking may additionally include the weight in English units. The marked weight must represent the actual weight of the individual TED as manufactured. Previously manufactured TEDs may be marked upon return to the original manufacturer. Where a TED is comprised of multiple detachable components, the weight of each component must be separately marked.

(iii) Buoyancy-dimension requirements. Floats of any size and in any combination, provided that they are marked pursuant to paragraph (a)(9)(ii)(A) of this section, must be attached such that the combined buoyancy of the floats equals or exceeds the following values:

(A) For floats constructed of aluminum or hard plastic, regardless of the size of the TED grid, the combined buoyancy must equal or exceed 14 lb (6.4 kg);

(B) For floats constructed of expanded polyvinyl chloride or expanded ethylene vinyl acetate, where the circumference of the TED is 120 inches (304.8 cm) or more, the combined buoyancy must equal or exceed 20 lb (9.1 kg); or

(C) For floats constructed of expanded polyvinyl chloride or expanded ethylene vinyl acetate, where the circumference of the TED is less than 120 inches (304.8 cm), the combined buoyancy must equal or exceed 10 lb (4.5 kg).

(b) Special Hard TEDs. Special hard TEDs are hard TEDs which do not meet all of the design and construction criteria of the generic standards specified in paragraph (a) of this section. The following special hard TEDs are approved TEDs:

(1) Flounder TED. (Figure 10 to this part). The Flounder TED is approved for use only in the Atlantic summer flounder bottom trawl fishery. The Flounder TED is not an approved TED for use by shrimp trawlers. The Flounder TED must be constructed of at least 1 1/4 inch (3.2 cm) outside diameter aluminum or steel pipe with a wall thickness of at least 1/8 inch (0.3 cm). It must have a rectangular frame with outside dimensions which can be no less than 51 inches (129.5 cm) in length and 32 inches (81.3 cm) in width. It must have at least five vertical deflector bars, with bar spacings of no more than 4 inches (10.2 cm). The vertical bars must be connected to the top of the frame and to a single horizontal bar near the bottom. The horizontal bar must be connected at both ends to the sides of the frame and parallel to the bottom bar of the frame. There must be a space no larger than 10 inches (25.4 cm) between the horizontal bar and the bottom bar of the frame. One or more additional vertical bars running from the bottom bar to the horizontal bar must divide the opening at the bottom into two or more rectangles, each with a maximum height of 10 inches (25.4 cm) and a maximum width of 14 1/2 inches (36.8 cm). This TED must comply with paragraph (a)(2) of this section. The angle of the deflector bars must be between 30 and 55 from the normal, horizontal flow through the interior of the trawl. The entire width of the escape opening from the trawl must be centered on and immediately forward of the frame at

the top of the net when the net is in its deployed position. The escape opening must be at the top of the net and the slope of the deflector bars from forward to aft is upward. The escape opening must be cut horizontally along the same plane as the TED, and may not be cut in a fore-and-aft direction. The cut in the trawl webbing for the escape opening cannot be narrower than the outside width of the grid minus 4 inches (10.2 cm) on both sides of the grid, when measured as a straight line width. The resulting escape opening in the net webbing must measure at least 35 inches (88.9 cm) in horizontal taut length and, simultaneously, 12 inches (30.5 cm) in vertical taut height. The vertical measurement must be taken at the midpoint of the horizontal measurement. This TED may not be configured with a bottom escape opening. Installation of an accelerator funnel is not permitted with this TED.

(2) Weedless TED. The weedless TED must meet all the requirements of paragraph (a) of this section for single-grid hard TEDs, with the exception of paragraphs (a)(1) and (a)(5) of this section. The weedless TED must be constructed of at least 1-1/4 inch (3.2 cm) outside diameter aluminum with a wall thickness of at least 1/8 inch (0.3 cm). The deflector bars must run from top to bottom of the TED, as the TED is positioned in the net. The ends of the deflector bars on the side of the frame opposite to the escape opening must be permanently attached to the frame. The ends of the deflector bars nearest the escape opening are not attached to the frame and must lie entirely forward of the leading edge of the outer frame. The ends of the unattached deflector bars must be no more than 4 inches (10.2 cm) from the frame and may not extend past the frame. A horizontal brace bar to reinforce the deflector bars, constructed of the same size or larger pipe as the deflector bars, must be permanently attached to the frame and the rear face of each of the deflector bars at a position anywhere between the vertical mid-point of the frame and the unattached ends of the deflector bars. The horizontal brace bar may be offset behind the deflector bars, using spacer bars, not to exceed 5 inches (12.7 cm) in length and constructed of the same size or larger pipe as the deflector bars. See Figure 15.

(3) Boone Big Boy TED. The Boone Big Boy TED is a single-grid hard TED with a minimum outside horizontal and vertical measurement of 36.5 inches (92.7 cm) and 48 inches (121.9 cm), respectively. The frame must be constructed of steel rod with a minimum outside diameter of 3/8 inch (0.95 cm). The deflector bars must be constructed of steel rod with a minimum outside diameter of 1/4 inch (0.64 cm). The space between the deflector bars must not exceed 4 inches (10.2 cm). A horizontal brace bar constructed of at least 1/4 -inch (0.64-cm) steel rod must be permanently attached to the frame and the rear face of each of the deflector bars within 4 inches (10.2 cm) of the midpoint of the TED frame. The horizontal brace bar may be offset behind the deflector bars, using spacer bars, not to exceed 5 inches (12.7 cm) in length and must be constructed of the same size or larger material as the deflector bars. The Boone Big Boy TED must be used with the Boone Wedge Cut escape opening specified in (a)(7)(ii)(D) of this section. The angle of the deflector bars must be between 30° and 55° from the normal, horizontal flow through the interior of the trawl. The Boone Big Boy TED is exempt from the requirements of paragraph (a)(3)(ii) of this section, and may be installed at 55° when fishing in the Gulf SFSTCA or the Atlantic SFSTCA.

(4) Modified flounder TED. (Figure 11 to this part). The modified flounder TED is approved for use only in the Atlantic summer flounder bottom trawl fishery. The modified flounder TED is not an approved TED for use by shrimp trawlers. The modified flounder TED incorporates two separate grid frames that are attached together. The frames of the grids must be constructed of at least 1 1/4 inch (3.2 cm) outside diameter aluminum or steel pipe with a wall thickness of at least 1/8 inch (0.32 cm). Each of the two grids of the modified flounder TED

must have outside dimensions of at least 36 inches (91.4 cm) in height and at least 48 inches (121.9 cm) in width. The upper grid is equipped with vertical deflector bars, which must be constructed of aluminum or steel flat bar with a minimum depth of 1 1/4 inches (3.2 cm) and a minimum thickness of 3/8 inch (0.95 cm). Vertical deflector bars must be connected to the top and bottom of the upper grid. The space between the deflector bars of the upper grid must not exceed 4 inches (10.2 cm). The lower grid is fabricated with both horizontal and vertical deflector bars, creating four narrow horizontal openings at the top, and three large rectangular openings along the bottom of the grid. The lower grid must have at least three horizontal deflector bars, constructed of aluminum or steel flat bar with a minimum depth of 1 1/2 inches (3.8 cm) and a minimum thickness of 3/8 inch (0.95 cm), which are connected to each side of the grid and angled at 30° from the horizontal plane. Below this, a fourth horizontal deflector bar must be constructed of aluminum or steel pipe with a wall thickness of at least 1/8 inch (0.32 cm) and with a 1 1/4 inch (3.2 cm) outside diameter. These horizontal deflector bars must yield maximum spacings of 4 1/2 inches (11.4 cm), 5 1/2 inches (14.0 cm), 5 1/2 inches (14.0 cm), and 4 1/2 inches (11.4 cm), as constructed from top to bottom and measured between the leading edges of adjacent deflector bars. There must be a maximum 10-inch (25.4 cm) space between the bottom-most horizontal deflector pipe bar and the grid frame bottom. Two additional vertical pipe sections running from the bottom of the grid frame to the bottom-most horizontal deflector pipe bar must divide the opening at the bottom into three rectangles, each with a maximum height of 10 inches (25.4 cm) and a maximum width of 14 inches (35.6 cm). This TED must comply with paragraph (a)(2) of this section. The upper and lower grids of this TED must be laced together with heavy twine no less than 1/4 inch (0.64 cm) in diameter in order to maintain a consistent angle in both sections. There may be a gap between the two sections not to exceed 1 inch (2.54 cm). The angle of the entire TED frame must be between 30° and 45° from the normal, horizontal flow through the interior of the trawl. The entire width of the escape opening from the trawl must be centered on and immediately forward of the frame at the top of the net when the net is in its deployed position. The slope of the grids and the vertical deflector bars from forward to aft is upward. The modified flounder TED must use an escape opening consistent with paragraph (a)(7)(ii)(B), (C), (D), or (E) of this section. A webbing flap, as described in paragraphs (d)(3)(ii), (iii), or (iv) of this section, may be used with this escape opening, so long as the minimum opening size is achieved. This TED may not be configured with a bottom escape opening. Installation of an accelerator funnel is not permitted with this TED.

(c) Soft TEDs. Soft TEDs are TEDs with deflector panels made from polypropylene or polyethylene netting. The following soft TEDs are approved TEDs:

(1) Parker TED. The Parker TED is a soft TED, consisting of a single triangular panel, composed of webbing of two different mesh sizes, that forms a complete barrier inside a trawl and that angles toward an escape opening in the top of the trawl.

(i) Excluder Panel. (Figure 5 to this part) The excluder panel of the Parker TED must be constructed of a single triangular piece of 8-inch (20.3 cm) stretched mesh webbing and two trapezoidal pieces of 4-inch (10.2-cm) stretched mesh webbing. The webbing must consist of number 48 (3-mm thick) or larger polypropylene or polyethylene webbing that is heat-set knotted or braided. The leading edge of the 8-inch (20.3-cm) mesh panel must be 36 meshes wide. The 8-inch (20.3-cm) mesh panel must be tapered on each side with all-bar cuts to converge on an apex, such that the length of each side is 36 bars. The leading edges of the 4-inch (10.2-cm) mesh panels must be 8 meshes wide. The edges of the 4-inch (10.2-cm) mesh panels must be cut with all-bar

cuts running parallel to each other, such that the length of the inner edge is 72 bars and the length of the outer edge is 89 bars and the resulting fore-and-aft edge is 8 meshes deep. The two 4-inch (10.2-cm) mesh panels must be sewn to the 8-inch (20.3-cm) mesh panel to create a single triangular excluder panel. The 72-bar edge of each 4-inch (10.2-cm) mesh panel must be securely joined with twine to one of the 36-bar edges of the 8-inch (20.3-cm) mesh panel, tied with knots at each knot of the 4-inch (10.2-cm) webbing and at least two wraps of twine around each bar of 4-inch (10.2-cm) mesh and the adjoining bar of the 8-inch (20.3-cm) mesh. The adjoining fore-and-aft edges of the two 4-inch (10.2-cm) mesh panels must be sewn together evenly.

(ii) Limitations on which trawls may have a Parker TED installed. The Parker TED must not be installed or used in a two-seam trawl with a tongue, nor in a triple-wing trawl (a trawl with a tongue along the headrope and a second tongue along the footrope). The Parker TED may be installed and used in any other trawl if the taper of the body panels of the trawl does not exceed 4b1p and if it can be properly installed in compliance with paragraph (c)(1)(iii) of this section.

(iii) Panel installation—(A) Leading edge attachment. The leading edge of the excluder panel must be attached to the inside of the bottom of the trawl across a straight row of meshes. For a two-seam trawl or a four-seam, tapered-wing trawl, the row of meshes for attachment to the trawl must run the entire width of the bottom body panel, from seam to seam. For a four-seam, straight-wing trawl, the row of meshes for attachment to the trawl must run the entire width of the bottom body panel and half the height of each wing panel of the trawl. Every mesh of the leading edge of the excluder panel must be evenly sewn to this row of meshes; meshes may not be laced to the trawl. The row of meshes for attachment to the trawl must contain the following number of meshes, depending on the stretched mesh size used in the trawl:

- (1) For a mesh size of $2\frac{1}{4}$ inches (5.7 cm), 152-168 meshes;
- (2) For a mesh size of $2\frac{1}{8}$ inches (5.4 cm), 161-178 meshes;
- (3) For a mesh size of 2 inches (5.1 cm), 171-189 meshes;
- (4) For a mesh size of $1\frac{7}{8}$ inches (4.8 cm), 182-202 meshes;
- (5) For a mesh size of $1\frac{3}{4}$ inches (4.4 cm), 196-216 meshes;
- (6) For a mesh size of $1\frac{5}{8}$ inches (4.1 cm), 211-233 meshes;
- (7) For a mesh size of $1\frac{1}{2}$ inches (3.8 cm), 228-252 meshes;
- (8) For a mesh size of $1\frac{3}{8}$ inches (3.5 cm), 249-275 meshes; and
- (9) For a mesh size of $1\frac{1}{4}$ inches (3.2 cm), 274-302 meshes.

(B) Apex attachment. The apex of the triangular excluder panel must be attached to the inside of the top body panel of the trawl at the centerline of the trawl. The distance, measured aft along the centerline of the top body

panel from the same row of meshes for attachment of the excluder panel to the bottom body panel of the trawl, to the apex attachment point must contain the following number of meshes, depending on the stretched mesh size used in the trawl:

- (1) For a mesh size of $2\frac{1}{4}$ inches (5.7 cm), 78-83 meshes;
- (2) For a mesh size of $2\frac{1}{8}$ inches (5.4 cm), 83-88 meshes;
- (3) For a mesh size of 2 inches (5.1 cm), 87-93 meshes;
- (4) For a mesh size of $1\frac{7}{8}$ inches (4.8 cm), 93-99 meshes;
- (5) For a mesh size of $1\frac{3}{4}$ inches (4.4 cm), 100-106 meshes;
- (6) For a mesh size of $1\frac{5}{8}$ inches (4.1 cm), 107-114 meshes;
- (7) For a mesh size of $1\frac{1}{2}$ inches (3.8 cm), 114-124 meshes;
- (8) For a mesh size of $1\frac{3}{8}$ inches (3.5 cm), 127-135 meshes; and
- (9) For a mesh size of $1\frac{1}{4}$ inches (3.2 cm), 137-146 meshes.

(C) Side attachment. The sides of the excluder panel must be attached evenly to the inside of the trawl from the outside attachment points of the excluder panel's leading edge to the apex of the excluder panel. Each side must be sewn with the same sewing sequence, and, if the sides of the excluder panel cross rows of bars in the trawl, the crossings must be distributed evenly over the length of the side attachment.

(iv) Escape opening. The escape opening for the Parker soft TED must match one of the following specifications:

(A) Inshore opening. This opening is the minimum size opening that may be used in inshore waters, except it may not be used in the inshore waters of Georgia and South Carolina, in which a larger minimum opening is required. A slit at least 56 inches (1.4 m) in taut length must be cut along the centerline of the top body panel of the trawl net immediately forward of the apex of the panel webbing. The slit must not be covered or closed in any manner. The edges and end points of the slit must not be reinforced in any way; for example, by attaching additional rope or webbing or by changing the orientation of the webbing.

(B) Offshore opening. A horizontal cut extending from the attachment of one side of the deflector panel to the trawl to the attachment of the other side of the deflector panel to the trawl must be made in a single row of meshes across the top of the trawl and measure at least 96 inches (243.8 cm) in taut width. All trawl webbing above the deflector panel between the 96-inch (243.8-cm) cut and edges of the deflector panel must be removed. A rectangular flap of nylon webbing not larger than 2-inch (5.1-cm) stretched mesh may be sewn to the forward edge of the escape opening. The width of the flap must not be larger than the width of the forward

edge of the escape opening. The flap must not extend more than 12 inches (30.5 cm) beyond the rear point of the escape opening. The sides of the flap may be attached to the top of the trawl but must not be attached farther aft than the row of meshes through the rear point of the escape opening. One row of steel chain not larger than 1/4 inch (0.64 cm) may be sewn evenly to the back edge of the flap. The stretched length of the chain must not exceed 96 inches (244 cm). A Parker TED using the escape opening described in this paragraph meets the requirements of §223.206(d)(2)(iv)(B). This opening or one that is larger must be used in all offshore waters and in the inshore waters of Georgia and South Carolina. It also may be used in other inshore waters..

(2) [Reserved]

(d) Allowable modifications to hard TEDs and special hard TEDs. Unless otherwise prohibited in paragraph (b) of this section, only the following modifications may be made to an approved hard TED or an approved special hard TED:

(1) Floats. In addition to floats required pursuant to paragraph (a)(9) of this section, floats may be attached to the top one-half of the TED, either outside or inside the net, but not to a flap. Floats attached inside the net must be behind the rear surface at the top of the TED.

(2) Accelerator funnel. An accelerator funnel may be installed in the trawl, if it is made of net webbing material with a stretched mesh size of not greater than 15/8 inches (4 cm), if it is inserted in the net immediately forward of the TED, and if its rear edge does not extend past the bars of the TED. The trailing edge of the accelerator funnel may be attached to the TED on the side opposite the escape opening if not more than one-third of the circumference of the funnel is attached, and if the inside horizontal opening as described above is maintained. In a bottom opening TED only the top one-third of the circumference of the funnel may be attached to the TED. In a top opening TED only the bottom one-third of the circumference of the funnel may be attached to the TED.

(i) In inshore waters, other than the inshore waters of Georgia and South Carolina in which a larger opening is required, the inside horizontal opening of the accelerator funnel must be at least 44 inches (112 cm).

(ii) In offshore waters and the inshore waters of Georgia and South Carolina, the inside horizontal opening of the accelerator funnel must be at least 71 inches (180 cm).

(3) Webbing flap. A webbing flap may be used to cover the escape opening under the following conditions: No device holds it closed or otherwise restricts the opening; it is constructed of webbing with a stretched mesh size no larger than 2 inches (5.1 cm); it lies on the outside of the trawl; it is attached along its entire forward edge forward of the escape opening; it is not attached on the sides beyond the row of meshes that lies 6 inches (15.2 cm) behind the posterior edge of the grid; the sides of the flap are sewn on the same row of meshes fore and aft; and the flap does not overlap the escape hole cut by more than 5 inches (12.7 cm) on either side.

(i) 44-inch inshore TED flap. This flap may not extend more than 24 inches (61 cm) beyond the posterior edge of the grid.

(ii) 71-inch offshore TED Flap. The flap must be a 133-inch (338-cm) by 52-inch (132-cm) piece of webbing. The 133-inch (338-cm) edge of the flap is attached to the forward edge of the opening (71-inch (180-cm) edge). The flap may extend no more than 24 inches (61 cm) behind the posterior edge of the grid (Figure 12 to this part illustrates this flap).

(iii) Double cover offshore TED flap. This flap must be composed of two equal size rectangular panels of webbing. Each panel must be no less than 58 inches (147.3 cm) wide and may overlap each other no more than 15 inches (38.1 cm). The panels may only be sewn together along the leading edge of the cut. The trailing edge of each panel must not extend more than 24 inches (61 cm) past the posterior edge of the grid (Figure 16 to this part). Each panel may be sewn down the entire length of the outside edge of each panel. Paragraph (d)(3) of this section notwithstanding, this flap may be installed on either the outside or inside of the TED extension. For interior installation, the flap may be sewn to the interior of the TED extension along the leading edge and sides to a point intersecting the TED frame; however, the flap must be sewn to the exterior of the TED extension from the point at which it intersects the TED frame to the trailing edge of the flap. Chafing webbing described in paragraph (d)(4) of this section may not be used with this type of flap.

(iv) Boone Wedge Cut opening flap. (Figure 17 to this part). This escape opening flap is attached to the trailing edge of the horizontal cut and the wedge. The flap is made from a piece of 17/8 inch (4.8 cm) webbing that is trapezoid in shape. The leading edge must be at least 94 meshes wide, stretching to at least 164.5 inches (417.8 cm). The trailing edge is at least 87 meshes wide and at least 152 inches (386.1 cm). The two sides are at least 8 meshes long and at least 15 inches (38.1 cm). The escape opening flap is attached only to the leading edge of the escape opening cut and is not attached along its sides.

(A) Edge lines. Optional edge lines can be used in conjunction with this flap. The line must be made of polyethylene with a maximum diameter of 3/8 inches (.95 cm). A single length of line must be used for each flap panel. The line must be sewn evenly to the unattached, inside edges and trailing edges, of each flap panel. When edge lines are installed, the outside edge of each flap panel must be attached along the entire length of the flap panel.

(B) [Reserved]

(4) Chafing webbing. A single piece of nylon webbing, with a twine size no smaller than size 36 (2.46 mm in diameter), may be attached outside of the escape opening webbing flap to prevent chafing on bottom opening TEDs. This webbing may be attached along its leading edge only. This webbing may not extend beyond the trailing edge or sides of the existing escape opening webbing flap, and it must not interfere or otherwise restrict the turtle escape opening.

(5) Roller gear. Roller gear may be attached to the bottom of a TED to prevent chafing on the bottom of the TED and the trawl net. When a webbing flap is used in conjunction with roller gear, the webbing flap must be of a length such that no part of the webbing flap can touch or come in contact with any part of the roller gear assembly or the means of attachment of the roller gear assembly to the TED, when the trawl net is in its normal, horizontal position. Roller gear must be constructed according to one of the following design criteria:

(i) A single roller consisting of hard plastic shall be mounted on an axle rod, so that the roller can roll freely about the axle. The maximum diameter of the roller shall be 6 inches (15.24 cm), and the maximum width of the axle rod shall be 12 inches (30.4 cm). The axle rod must be attached to the TED by two support rods. The maximum clearance between the roller and the TED shall not exceed 1 inch (2.5 cm) at the center of the roller. The support rods and axle rod must be made from solid steel or solid aluminum rod no larger than 1/2 inch (1.28 cm) in diameter. The attachment of the support rods to the TED shall be such that there are no protrusions (lips, sharp edges, burrs, etc.) on the front face of the grid. The axle rod and support rods must lie entirely behind the plane of the face of the TED grid.

(ii) A single roller consisting of hard plastic tubing shall be tightly tied to the back face of the TED grid with rope or heavy twine passed through the center of the roller tubing. The roller shall lie flush against the TED. The maximum outside diameter of the roller shall be 3 1/2 inches (8.0 cm), the minimum outside diameter of the roller shall be 2 inches (5.1 cm), and the maximum length of the roller shall be 12 inches (30.4 cm). The roller must lie entirely behind the plane of the face of the grid.

(6) Water deflector fin for hooped hard TEDs. On a hooped hard TED, a water deflector fin may be welded to the forward edge of the escape opening. The fin must be constructed of a flat aluminum bar, up to 3/8 inch (0.95 cm) thick and up to 4 inches (10.2 cm) deep. The fin may be as wide as the width of the escape opening, minus 1 inch (2.5 cm). The fin must project aft into the TED with an angle between 5° and 45° from the normal, horizontal plane of the trawl. On an inshore hooped hard TED, the clearance between the deflector bars and the posterior edge of the deflector fin must be at least 20 inches (51 cm). On an offshore hooped hard TED, the clearance between the deflector bars and the posterior edge of the deflector fin must be at least 23-1/4 inches (59 cm).

(7) Hinged door frame for hooped hard TEDs. A hinged door frame may be attached to the forward edge of the escape opening on a hooped hard TED. The door frame must be constructed of materials specified at paragraphs (a)(1)(i) or (a)(1)(ii) of this section for inshore and offshore hooped hard TEDs, respectively. The door frame may be covered with a single panel of mesh webbing that is taut and securely attached with twine to the perimeter of the door frame, with a mesh size not greater than that used for the TED extension webbing. The door frame must be at least as wide as the TED escape opening. The door frame may be a maximum of 24 inches (61 cm) long. The door frame must be connected to the forward edge of the escape opening by a hinge device that allows the door to open outwards freely. The posterior edge of the door frame, in the closed position, must lie at least 12 inches (30 cm) forward of the posterior edge of the escape opening. A water deflector fin may be welded to the posterior edge of the hinged door frame. The fin must be constructed of a flat aluminum bar, up to 3/8 inch (0.95 cm) thick and up to four inches (10.2 cm) deep. The fin may be as wide as the width of the escape opening, minus one inch (2.5 cm). The fin must project aft into the TED with an angle between 5° and 45° from the normal, horizontal plane of the trawl, when the door is in the closed position. The clearance between the posterior edge of the escape opening and the posterior edge of the door frame or the posterior edge of the water deflector fin, if installed, must be no less than 12 inches (30 cm), when the door is in the closed position. Two stopper ropes or a hinge limiter may be used to limit the maximum opening height of the hinged door frame, as long as they do not obstruct the escape opening in any way or restrict the free movement of the door to its fully open position. When the door is in its fully open position, the minimum clearance between any part of the deflector bars and any part of the door, including a water deflector fin if installed, must be at least 20

inches (51 cm) for an inshore hooped hard TED and at least 23¼ inches (59 cm) for an offshore hooped hard TED. The hinged door frame may not be used in combination with a webbing flap specified at paragraph (d)(3) of this section or with a water deflection fin specified at paragraph (d)(6) of this section.

(8) Chauvin shrimp deflector. (Figures 19a and 19b to this part). The Chauvin shrimp deflector may be used on any approved TED design, but its installation must not reduce the minimum stretched measurements of the TED opening. The Chauvin shrimp deflector may not be installed with a bottom escape opening. The Chauvin shrimp deflector is constructed from a single piece of 3-inch (7.6-cm) inside diameter PVC pipe which measures 30 inches (76.2 cm) in length; the ends of the PVC pipe are left uncapped. A webbing or mesh bag is made and is used to encase the PVC pipe (Figure 19a to this part). The mesh bag is created using a single piece of 15/8 inch (4.1 cm) stretched-mesh webbing made of nylon or polyethylene with dimensions 57 meshes wide by 10 meshes deep. The leading edge of the 57-mesh piece of webbing is attached around the PVC pipe and back to the row of meshes located 7 meshes down the 10-mesh length. The ends of the webbing are sewn together on each end forming a webbing bag to assure the PVC pipe remains encased in the webbing. This leaves a 3-mesh tail hanging from the encased PVC pipe. The 3-mesh tail of the encased PVC pipe is then sewn to a single row of meshes on the inside of the trawl along the 57-mesh edge, 3 meshes ahead of the forward cut of the TED escape opening. This would allow a 3-mesh overlap to the left and right of the forward cut (Figure 19b to this part).

(9) Brace bar. (Figure 14a of this part). A horizontal brace bar may be added to a TED if the brace bar is constructed of aluminum or steel rod or tubing specified in 50 CFR 223.207(a)(1)(i)(A) through (C), or flat bar 3/8 -inch (0.95 cm) or more in thickness, and is permanently attached to the rear of the outer frame; for TEDs constructed of flat bar less than 3/8 -inch (0.95 cm) in thickness, the regulations specified in 50 CFR 223.207(a)(1)(i)(D) apply. The horizontal brace bar may be permanently secured to the rear face of each of the deflector bars. The horizontal brace bar may be offset behind the deflector bars, using spacer bars attached to the rear face of each of the deflector bars, not to exceed 5 inches (12.7 cm) in length, and must be constructed of the same size or larger material as the deflector bars.

(e) Revision of generic design criteria, and approval of TEDs, of allowable modifications of hard TEDs, and of special hard TEDs. (1) The Assistant Administrator may revise the generic design criteria for hard TEDs set forth in paragraph (a) of this section, may approve special hard TEDs in addition to those listed in paragraph (b) of this section, may approve allowable modifications to hard TEDs in addition to those authorized in paragraph (d) of this section, or may approve other TEDs, by regulatory amendment, if, according to a NMFS-approved scientific protocol, the TED demonstrates a sea turtle exclusion rate of 97 percent or greater (or an equivalent exclusion rate). Two such protocols have been published by NMFS (52 FR 24262, June 29, 1987; and 55 FR 41092, October 9, 1990) and will be used only for testing relating to hard TED designs. Testing under any protocol must be conducted under the supervision of the Assistant Administrator, and shall be subject to all such conditions and restrictions as the Assistant Administrator deems appropriate. Any person wishing to participate in such testing should contact the Director, Southeast Fisheries Science Center, NMFS, 75 Virginia Beach Dr., Miami, FL 33149-1003.

(2) Upon application, the Assistant Administrator may issue permits, subject to such conditions and restrictions as the Assistant Administrator deems appropriate, authorizing public or private experimentation aimed at

improving shrimp retention efficiency of existing approved TEDs and at developing additional TEDs, or conducting fishery research, that would otherwise be subject to §223.206(d)(2). Applications should be made to the Southeast Regional Administrator (see §222.102 definition of “Southeast Regional Administrator”).

[64 FR 14073, Mar. 23, 1999, as amended at 64 FR 55438, Oct. 13, 1999; 66 FR 1603, Jan. 9, 2001; 66 FR 24288, May 14, 2001; 68 FR 8467, Feb. 21, 2003; 68 FR 51514, Aug. 27, 2003; 68 FR 54934, Sept. 19, 2003; 69 FR 31037, June 2, 2004; 77 FR 29907, May 21, 2012; 77 FR 48106, Aug. 13, 2012]

Effective Date Note: At 64 FR 14073, Mar. 23, 1999, §223.207 was added. Paragraphs (a)(9)(ii) (A) and (B) contain information collection and recordkeeping requirements and will not become effective until approval has been given by the Office of Management and Budget.

Appendix B

TABLES OF ENFORCEMENT FROM NOAA, USCG, LDWF

NOAA TED Inspection and Compliance (October 1, 2011 - January 1, 2013)

INSPECTIONS, BY STATE: 516

	NC	SC	GA	FL	AL	MS	LA	TX	Grand Total
Oct-11						6	93		99
Nov-11								32	32
Dec-11	5		3	4					12
Jan-12				4				3	7
Feb-12				3		4	3	3	13
Mar-12				1				12	13
Apr-12				1			49	14	64
May-12	1		7	4				4	16
Jun-12	4			2	3	13	15	34	71
Jul-12	5						27	77	109
Aug-12	18	1		2		11		16	48
Sep-12		9	4	11					24
Oct-12		2							2
Nov-12				2					2
Dec-12								4	4
Grand Total	33	12	14	34	3	34	187	199	516

This table contains information on all shrimp trawl vessels inspected by NOAA Office of Law Enforcement, by the state where the inspections occurred, during the time period indicated.

INSPECTIONS WITH VIOLATIONS, BY STATE: 131

	NC	SC	GA	FL	AL	MS	LA	TX	Grand Total
Oct-11						4	38		42
Nov-11								15	15
Dec-11	1		3	1					5
Jan-12				2				2	4
Feb-12				1				3	4
Mar-12								4	4
Apr-12				1			1	3	5
May-12			6	3				1	10
Jun-12	1			1				11	13
Jul-12							2	8	10
Aug-12	6	1		1		1		1	10
Sep-12		1		4					5
Oct-12		1							1
Nov-12									0
Dec-12								3	3
Grand Total	8	3	9	14	0	5	41	51	131

Out of all the inspections recorded above, this table contains information on the number of vessels with noncompliant TEDs observed by NOAA Office of Law Enforcement, by the state where the inspections occurred, during the time period indicated.

RESULTS OF INSPECTIONS, BY STATE:

	NC	SC	GA	FL	AL	MS	LA	TX	Grand Total	
Fix It	5	1	2	6	0	1	22	37	9	
Verbal Warning	1	1	1			2			2	69
Written Warning	1		4	1		9	4	22		
Summary Settlement							3	3		
Fishing Violation			1	2		1	10	4	18	
Notice of Violation and Assessment							2	2		
State Prosecution	1		1				1	3		
State Warning				5				5		
Grand Total	8	2	9	15		0	5	41	51	131

This table contains information on the current outcome resulting from the violations observed by NOAA Office of Law Enforcement, by the state where the inspections occurred. It is important to note that not all violations are serious violations, and some may not be likely to appreciably increase the degree of the effect on animals interacting with the gear. While it is not uniform and difficult to precisely characterize, there is a correlation between the seriousness of the violation and the result indicated in the table. Thus, moving down the list of results in the table reflects a general increase in the seriousness of the observed violation, and a concomitant increase in the potential impact on animals interacting with the gear.

ALL DATA PRESENTED IN THIS DOCUMENT ARE PRELIMINARY AND SUBJECT TO FURTHER REVIEW AND REVISION.

UNITED STATES COAST GUARD
LOUISIANA SHRIMP VESSEL BOARDINGS
SECTOR NEW ORLEANS AOR FY09-FY14

FY	TOTAL BOARDINGS	NO VIOLATIONS	WARNINGS	TED/BRD VIOLATIONS
FY09	48	18	0	6
FY10	38	19	1	3
FY11	38	19	0	4
FY12	113	71	2	0
FY13	58	43	1	1
FY14	15	14	0	1

DATA PROVIDED BY USCG SECTOR NEW ORLEANS

Appendix C

From the Report on the Mexico/United States of America Population Restoration Project for the Kemp's Ridley Sea Turtle, *Lepidochelys kempii*, on the Coasts of Tamaulipas, Mexico 2013:

Year	Nests	Hatchlings	Year	Nests	Hatchlings
1978	924	48,009	1996	2,080	119,196
1979	954	63,996	1997	2,387	149,567
1980	868	37,378	1998	3,845	183,920
1981	897	53,282	1999	3,648	228,148
1982	750	48,007	2000	6,277	395,150
1983	746	32,921	2001	5,442	317,127
1984	798	58,124	2002	6,436	402,969
1985	702	51,033	2003	8,323	476,138
1986	744	48,818	2004	7,147	500,767
1987	737	44,634	2005	10,099	630,737
1988	842	62,218	2006	12,143	782,319
1989	828	66,802	2007	15,032	1,023,675
1990	992	74,339	2008	17,882	817,103
1991	1,178	79,749	2009	21,144	1,089,452
1992	1,275	92,116	2010	13,302	723,065
1993	1,241	84,605	2011	20,576	685,387
1994	1,562	107,687	2012	21,797	1,115,527
1995	1,930	120,038	2013	16,385	755,428