

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 222, 223 and 224

[Docket No. 000320077-2302-03; I.D. 062501B]

RIN 0648-AN62

Endangered and Threatened Wildlife; Sea Turtle Conservation
Requirements

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

ACTION: Final rule.

SUMMARY: NMFS is amending the turtle excluder device (TED)
regulations to enhance their effectiveness in reducing sea turtle
mortality resulting from trawling in the southeastern United
States. NMFS has determined that: some current approved TED
designs do not adequately exclude leatherback turtles and large,
immature and sexually mature loggerhead and green turtles;
several approved TED designs are structurally weak and do not
function properly under normal fishing conditions; and
modifications to the trynet and bait shrimp exemptions to the TED
requirements are necessary to decrease lethal take of sea
turtles. These amendments are necessary to protect endangered
and threatened sea turtles in the Atlantic Area (all waters of
the Atlantic Ocean south of the North Carolina/Virginia border

and adjacent seas, other than the Gulf Area, and all waters shoreward thereof) and Gulf Area (all waters of the Gulf of Mexico west of 81° W. long. and all waters shoreward thereof).

DATES: This final rule will take effect April 15, 2003, however it is not applicable in the Gulf Area until [insert date 6 months after date of publication in the FEDERAL REGISTER].

ADDRESSES: Copies of: Epperly, S. P. and W.G. Teas. 2002.

Turtle excluder devices - Are the escape openings large enough?

Fish. Bull. 100:466-474, can be obtained through the following

web site: <http://fishbull.noaa.gov/fcontent.htm>, or can be

requested, along with copies of an Environmental

Assessment/Regulatory Impact Review/Final Regulatory Flexibility

Analysis, from the Protected Resources Division, Southeast

Regional Office, 9721 Executive Center Drive, North, Suite 102

St. Petersburg, FL, 33702.

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SUPPLEMENTARY INFORMATION:

Background

All sea turtles that occur in U.S. waters are listed as either endangered or threatened under the Endangered Species Act of 1973 (ESA). The Kemp's ridley ([Lepidochelys kempii](#)),

leatherback (Dermochelys coriacea), and hawksbill (Eretmochelys imbricata) turtles are listed as endangered. The loggerhead (Caretta caretta) and green (Chelonia mydas) turtles are listed as threatened, except for breeding populations of green turtles in Florida and on the Pacific coast of Mexico, which are listed as endangered.

The incidental take and mortality of sea turtles as a result of trawling activities have been documented in the Gulf of Mexico and along the Atlantic Ocean seaboard. Under the ESA and its implementing regulations, taking sea turtles is prohibited, with exceptions identified in 50 CFR 223.206 and 50 CFR 224.104. The regulations require most shrimp trawlers and summer flounder trawlers operating in the southeastern United States (Atlantic Area, Gulf Area, and summer flounder sea turtle protection area, all as defined in 50 CFR 222.102) to have a NMFS-approved TED installed in each net that is rigged for fishing to provide for the escape of sea turtles. TEDs currently approved by NMFS include single-grid hard TEDs and hooped hard TEDs conforming to a generic description, two types of special hard TEDs (the flounder TED and the Jones TED), and one type of soft TED (the Parker soft TED).

The TEDs incorporate an escape opening, usually covered by a webbing flap, that allows sea turtles to escape from trawl nets. To be approved by NMFS, a TED design must be shown to be at least

97 percent effective in excluding sea turtles during experimental TED testing (50 CFR 223.207(e)). The TED must meet generic criteria based upon certain parameters of TED design, configuration, and installation, including height and width dimensions of the TED opening through which the turtles escape. In the Atlantic Area, these requirements are currently ≥ 35 inches (≥ 89 cm) in width and ≥ 12 inches (≥ 30 cm) in height. In the Gulf Area, the requirements are ≥ 32 inches (81 cm) in width and ≥ 10 inches (≥ 25 cm) in height (these measurements are taken simultaneously).

The use of TEDs has contributed to population increases documented for Kemp's ridley turtles. Kemp's ridleys are the smallest sea turtle species, and adults can easily pass through the current TED opening dimensions. Once the most critically endangered sea turtle, Kemp's ridley nesting levels have increased from 700-800 per year in the mid-1980's to over 6,000 nests in 2000. Since 1990, corresponding with the more widespread use of TEDs in U.S. waters, the total annual mortality of Kemp's ridley turtles has been reduced by 44-50 percent (TEWG, 2000). NMFS believes that the use of TEDs has had a significant beneficial impact on the survival and recovery of sea turtle species.

NMFS is concerned that TEDs are not adequately protecting all species and size classes of turtles. There is new

information showing that 33-47 percent of stranded loggerheads and 1-7 percent of stranded green turtles are too large to fit through the current TED openings. Comprehensive scientific data on the body depths of these turtles were not available when the original TED sizes were specified. The original TED sizes were also much too small to allow leatherback sea turtles - the largest species - to escape. Instead, NMFS has attempted to address the incidental catch of leatherbacks through a regime of reactive closures that has proven ineffective. There is also concern about the status of loggerhead and leatherback turtle populations: the northern nesting population of loggerheads appears to be stable or declining (TEWG, 2000) and nesting of leatherbacks is declining on several main nesting beaches in the western North Atlantic (NMFS SEFSC, 2001).

NMFS completed a biological opinion (Opinion) in December 2002, on Shrimp Trawling in the Southeastern United States, under the Sea Turtle Conservation Regulations and as managed by the Fishery Management Plans for Shrimp in the South Atlantic and Gulf of Mexico. Based on information in a NOAA technical memorandum completed in November 2002, (NOAA Technical Memorandum NMFS-SEFSC-490) the Opinion estimated that 62,000 loggerhead turtles and 2,300 leatherback turtles are killed as a result of an interaction with a shrimp trawl. Information in this Opinion also indicate that up to 75 percent of the loggerhead turtles in

the Gulf of Mexico and about 2.5 percent of the loggerheads in the Atlantic that encounter a shrimp trawl are too large to escape the current minimum openings. The implementation of this rule, however, is expected to allow all size classes of loggerhead and leatherback turtles to escape. The Opinion estimated that implementation of this rule will decrease shrimp trawl related mortality by 94 percent for loggerheads and 96 percent for leatherbacks.

To protect large green, loggerhead and leatherback turtles NMFS proposed modifying the TED regulations to ensure that TEDs are capable of releasing these large turtles (66 FR 17852, April 5, 2000; 66 FR 50148, October 2, 2001). The proposed changes would have been applicable in all inshore and offshore waters of the Southeast United States as follows: (1) Require all hard TEDs to have a grid with a minimum inside measurement of 32 inch (81 cm) by 32 inch (81 cm); (2) require the use of either the double cover flap TED, a TED with a minimum opening of 71-inch (180-cm) straight-line stretched mesh, or the Parker soft TED with a 96-inch (244-cm) opening; (3) disallow the use of the hooped hard TED; (4) disallow the use of weedless TEDs and the Jones TED; (5) disallow the use of accelerator funnels; (6) require bait shrimpers to use TEDs in states where a state-issued bait shrimp license holder can also fish for food shrimp from the same vessel; and (7) require the use of tow times on small try nets.

Public Comments

The measures in this final rule are based, in part, on comments received on the Advanced Notice of Proposed Rule Making (ANPR) (65 FR 17852, April 5, 2000), the proposed rule (66 FR 50148, October 2, 2001) and eight public hearings held throughout the southeastern United States. NMFS received 23 comments as a result of the ANPR and 8,273 comments as a result of the proposed rule and public hearings; of the 8,273 responses, 7,714 were letters from the public which were similar in content. NMFS reviewed all of the comments received. Where appropriate, comments are grouped according to general subject matter, and references are made only to some groups or individuals, and not to all groups or individuals who may have made similar comments.

Comment 1: Some fishermen believe that the economic analysis that NMFS completed for the proposed rule is flawed in the following ways: (1) The cost to retrofit TEDs is far too low; (2) the 20 percent profit margin used is too high; (3) the cumulative loss of shrimp as a result of the proposed changes in addition to existing requirements is not considered; (4) an analysis of possible shrimp loss due to the prohibition of accelerator funnels is lacking; (5) the analysis of the economic impact to small businesses is inadequate; (6) the percentage of shrimp loss is too low and should be 15 to 20 percent; (7) information on gear replacement frequency is inaccurate; and (8) the economic

analysis does not consider the effects the rule will have on fishermen in combination with depressed shrimp prices.

Response: NMFS has completed a Final Regulatory Flexibility Analysis (FRFA) and Regulatory Impact Review (RIR), in conjunction with an environmental assessment, on this final rule's effects in accordance with the Regulatory Flexibility Act (5 U.S.C. 601 et seq.) and Executive Order (E.O.) 12866. This EA/RIR/FRFA analyzes this final rule's effects on the shrimp fishery in combination with past TED and Bycatch Reduction Devices (BRD) rules. It also analyzes this final rule's effects on the shrimp fishery in light of current shrimp price information as well as the best available information from existing databases on profit margins, gear costs, and the durability of and cost to replace equipment. The average replacement cost for a leatherback TED was assumed to be \$220, 4 TEDS were assumed necessary for small vessels and 8-10 TEDs for large vessels, and the average useful life of a TED was assumed to be 3 years. In the assessment of the proposed rule NOAA Fisheries assumed a 1-year life span for the equipment and used a cost of \$45 dollars for replacement. Because the equipment was only expected to last 1 year NOAA Fisheries felt that replacement costs would be low because the fishermen would have to replace the gear anyway so the only actual cost increase would be from the difference in cost of a leatherback TED verses the current

TEDs. The assumption of a 20-percent profit margin was eliminated and, instead, vessel profits were internally calculated based on expected revenues and variable costs. Shrimp loss under current regulations as well as the proposed regulations was considered and discussed in the analysis. Estimates of shrimp loss under different TED requirements were derived from test data and provided by the NMFS Southeast Fisheries Science Center (SEFSC). Testing methods are described in the responses to comments 11 and 12 of this section. The tests used currently authorized TEDs which include the use of accelerator funnels.

To incorporate the effects of the depressed shrimp prices, 2001 prices were utilized throughout the assessment. The results of the analysis indicate that, under status quo conditions including depressed shrimp prices, while profits (defined as average revenue minus average variable costs) per vessel in the Southeast shrimp trawl fishery, are expected to increase over the next 5 years, this will be accomplished due to contraction of the fishery in terms of total effort, which is expected to decline by approximately 5.4 percent. The effort contraction is comprised of growth in the small vessel fleet, coupled with reductions in the large vessel fleet. Since large vessels are more costly to operate, the resultant physical profile of the fleet is, on average, smaller with lower variable costs. The net effect is

that shrimp landings per vessel increase, while variable costs per vessel decline, resulting in an increase in profits, as defined, per vessel. Revenues remain, however, on the average, insufficient to cover both operating and fixed costs. The net impact of the proposed rule is not expected to significantly adversely affect this outcome, with the change in average profits per vessel ranging from a gain of 0.5 percent to a loss of 2.4 percent from the status quo.

Comment 2: Some fishermen believe that the shrimp fishery is bearing the majority of the burden for the recovery of sea turtles. They feel the government should help them out by implementing such things as: (1) a TED buy-back program; (2) tax incentives for using TEDs; and (3) price controls and subsidies on shrimp, similar to what corn, soybean, and wheat farmers receive. Fishermen also believe that the government should provide better enforcement of Public Law 101-162 section 609(b).

Response: Only Congress can authorize programs such as equipment buy-backs, tax incentives, and price controls and subsidies.

Public Law 101-162 section 609(b) prohibits the importation of shrimp harvested with fishing technology that may adversely affect such species of sea turtles. Under section 609, shrimp may be imported from a harvesting nation for which the U.S. government has certified that the nation has demonstrated that

its regulatory program governing the incidental taking of sea turtles is comparable to that of the United States. The Court of Appeals for the Federal Circuit recently upheld the government's interpretation of section 609 allowing import of shrimp from countries that are not certified if the exporter and an official of the harvesting nation attest that the individual shipment of shrimp was harvested under conditions that do not adversely affect sea turtles. Turtle Island Restoration Network v. Evans, 284 F.3d 1282 (Fed. Cir. March 21, 2002).

NMFS has been actively engaged with the Department of State (DOS) in enforcing section 609 of Public Law 101-162, since it was enacted in 1990. Nations with shrimp fisheries in the Atlantic, Pacific and Indian Oceans, the Caribbean Sea, and the Gulf of Mexico have faced trade restrictions on their commercially harvested shrimp exports to the United States. In most cases, these embargoes remained in place until the national government implemented a sea turtle protection program comparable in effectiveness to that of the United States. Embargoes on wild caught shrimp from nations with ineffective enforcement regimes have also been enacted. NMFS and DOS visit participating countries regularly to observe the performance of the foreign TED programs and ensure that certifications made pursuant to section 609 are based on the best information available. DOS has determined that section 609's embargo provision only applies to

wild-harvested shrimp and not to aquacultured shrimp which make up the majority of U. S. imports.

Comment 3: Some fishermen commented that the larger TEDs could not be pulled by boats with small trawls and that large turtles would be unable to pass through the neck of the trawl to reach the grid. Also, a 71-inch (180-cm) opening installed in a small trawl will not properly support the TED. The TED would become wobbly, lose its angle, and may rip away from the trawl.

Response: During their June 2002, TED testing trip to Panama City, FL, NMFS gear technicians tested the 71-inch (180-cm) opening in a small trawl and found that it could be effectively used in a trawl with a 120-mesh extension. The gear technicians used a model leatherback turtle to determine if it could move through the trawl neck and reach the grid. The model turtle is an aluminum pipe frame that is made to resemble a leatherback turtle that is 40 inches wide (102 cm) by 21 inches deep (53 cm). These dimensions are based on the average measurements taken of 15 nesting leatherback turtles. The gear technicians were able to pass the model through the trawl with a 120 mesh extension to the grid and out the 71 inch (180 cm) opening. NMFS believes that the use of a 71 inch (180 cm) TED or the double cover flap TED in a small trawl will be effective for large turtle release and fishing efficiency.

Gear technicians also tested the use of a 140-mesh extension

in a small trawl. The trawl's performance was not altered by the use of the larger extension. The larger extension also made the installation of the large TED easier and the extra webbing made for a stronger installation and allowed the TED to maintain its angle better. The model leatherback also passed through the trawl to the grid and out the opening more easily than it did through the trawl with the 120 mesh extension. NMFS believes that fishermen who use small trawls may want to use a 140 mesh extension with the new, larger TED to provide better fishing and turtle release performance.

Comment 4: Some fishermen and the Georgia Department of Natural Resources (GA DNR) believe that the grid size should be 32 inches (81 cm) measured from the outside of the TED frame, not the inside. This is the grid size many fishermen use.

Response: NMFS is requiring a minimum grid size of 32 inches (81 cm) by 32 inches (81 cm) outside measurement, rather than the inside measurement originally proposed. TEDs of this size can be used effectively with the larger escape opening dimensions. This change may eliminate gear replacement costs for many fishermen.

Comment 5: The GA DNR believes that the dimensions of the cuts for the new opening should be the same dimensions as those for the current leatherback TED, not the dimensions that were proposed. GA DNR reports that only 9 out of 61 captains who use the current leatherback TED claim that the TED loses shape faster

than the 35 inch (89 cm) by 12 inch (30 cm) TED. They also suggest that to reduce stress in the trawl, the grid should be oval with dimensions of at least 31 inches (79 cm) by 42 inches (107 cm).

Response: NMFS disagrees that the dimensions of the new opening should be those currently required for the leatherback opening. However, NMFS agrees that the dimensions should be altered from the opening specified in the proposed rule. Based on further information from fishermen who use the current leatherback TED and additional testing of the new opening, the cuts for the new 71-inch (181-cm) TED will be as follows: Two 26 inch (66 cm) cuts forward of the TED frame and one 71-inch (181-cm) cut across the top of the opening. NOAA gear technicians tested the 71-inch (181-cm) TED with three different cuts, to determine which cut would be most capable of releasing a leatherback turtle. This testing was conducted by using the model leatherback described in the response to comment 3. The model leatherback passed through the 71-inch (181-cm) TED with an opening made with a 71-inch (181-cm) by 26-inch (66-cm) cut more easily than it did through the 71-inch TED with an opening made with a 71-inch (181 cm) by 20-inch (51-cm) cut; however, there was little to no difference between an opening made with a 71-inch (181-cm) by 26-inch (66-cm) cut and an opening made with an 83-inch (211-cm) by 26-inch (66-cm) cut (the dimensions of the

current leatherback TED). NMFS believes that the 71-inch (181-cm) by 26-inch (66-cm) cut results in a stronger TED than the 83-inch (211-cm) by 26-inch (66-cm) cut because the former cut takes out less webbing.

Although an oval grid with measurements of 31 inches (79 cm) by 42 inches (107 cm) may work well with the new opening sizes, NMFS believes that other size and shaped grids will also work well. Allowing different grid sizes and shapes will allow fishermen greater flexibility in customizing their gear to help meet the demands of the different areas in which they fish.

Comment 6: Net makers, fishermen, and various state agencies are concerned with the elimination of gear that works well in their areas such as the Coulon TED, weedless TED, and accelerator funnels. Fishermen believe that the new TED requirements will minimize options to choose gear that will optimize shrimp catch while still protecting turtles.

Response: NMFS agrees and is allowing the weedless TED, hooped hard TED (of which the Coulon TED is one type), and accelerator funnels to be used in certain areas and with certain conditions. These areas and conditions are described in detail in the codified language below, and are only briefly described here. Hooped hard TEDs, of which the Coulon TED is a variety, can be modified to release large loggerhead turtles but cannot be modified to release leatherback turtles; therefore, NMFS believes

that this TED, with the modifications to release large loggerheads, can be used in those inshore areas where leatherbacks are uncommon. The weedless TED can be strengthened through the use of a brace bar which will reinforce the grid bars to keep them from bending toward the back of the TED. This will eliminate the problem which caused NMFS to propose banning the weedless TED. Recent testing by gear technicians has shown that accelerator funnels with increased dimensions to allow the escape of large loggerhead and leatherback turtles can work effectively.

Comment 7: Louisiana fishermen encounter a large number of objects and debris that force open the TED flap causing shrimp loss. They claim that contrary to NMFS statements that larger openings will allow debris to escape, the shrimp losses will be compounded with the larger opening as water pressure forces these items to stay against the grid and the same water pressure opens the flap.

Response: The experiences of fishermen on the east coast who have used the leatherback TED extensively indicate that if this TED is properly maintained it will expel debris better than TEDs with smaller openings. NMFS realizes that fishing conditions in the Atlantic may differ from the Gulf; however, NMFS believes that there is a greater chance of debris blocking the grid and holding open the flap in TEDs with smaller openings which may result in greater shrimp loss. Larger openings would prevent the

debris from accumulating in front of the TED thereby allowing the flap to close.

Comment 8: Environmental organizations state that the proposed rule allows the use of the Parker soft TED which should be eliminated as an approved TED. They claim soft TEDs stretch over time and are less effective than hard grid TEDs in excluding turtles.

Response: NMFS looked at many aspects of the Parker soft TED's performance over a 30-month period in both the Gulf of Mexico and the Atlantic Ocean. Observer data show a favorable comparison between the efficiency of the Parker TED and approved hard TEDs. Information from NOAA enforcement indicates that the Parker TED is used more in the Atlantic than in the Gulf, but even in the Atlantic the use is low (<50 boats). NOAA enforcement has found that the compliance rate is good on the boats that do use the Parker TED. NMFS' gear specialists provided training to net shop owners, net manufacturers, and fishermen in the proper installation and use of the Parker TED. For these reasons, NMFS believes that this TED can be used effectively to protect turtles. However, as with all TEDs, maintenance is important. For example, netting can stretch over time which can cause a Parker soft TED to lose its shape. Similar maintenance (e.g. to maintain TED angle) is also required for hard TEDs.

Comment 9: Fishing organizations believe the Andrews-style soft TED should be re-certified for use as an approved TED.

Response: NMFS disapproved the use of the Andrews soft TED (61 FR 66933, December 19, 1996) after extensive testing demonstrated that this TED did not exclude turtles effectively. Modifications to the Andrews soft TED were tested by NMFS with direction from an industry-led TED testing advisory panel in 1996, 1997, and 1998. Most design versions of this TED did not pass the small turtle protocol with the exception of two designs tested in 1998. Following the 1997 tests, members of the industry-led soft TED advisory panel evaluated shrimp retention with the modified Andrews TED aboard a commercial shrimp trawler. The panel reported that the modified Andrews TED had an estimated shrimp loss of 20 percent when compared to a hard TED. The TED testing review committee (which is made up of representatives from the shrimp industry, environmental groups and NMFS) recommended that before pursuing final certification of the designs tested in 1998, industry should test these designs for shrimp retention. To NMFS' knowledge, these designs have not been tested for shrimp retention by industry.

Comment 10: Fishermen, environmental organizations, and state agencies believe that the double cover flap TED needs further testing to determine its ability to exclude sea turtles.

Response: Results from NMFS' testing indicate the double

cover flap TED design was effective at excluding the model leatherback described in the response to comment 3. During TED testing in 2000, 2001, and 2002, a total of 71 loggerhead turtles (captive-reared 2- and 3-year olds) were exposed to the double cover flap TED under test protocols (5 minute exposure). Of the 71 turtles, 69 escaped and 2 were captured which equates to a 97 percent escape success rate. The model leatherback was sent through the double cover flap a total of 10 times, 5 times in a bottom opening version and 5 times in a top opening version. The test was performed by a diver swimming through the trawl with the model and pushing it through the TED opening. During this test, the diver was able to push the model through either opening with ease. When the model was inverted (simulating the dorsal surface of the turtle being against the TED frame) the diver was still able to push the model through the opening with ease. During offshore testing of the double cover flap TED, aboard the R/V GEORGIA BULLDOG in May 2002, a total of 7 wild turtles were videotaped escaping (all turtles were hard shell turtles and appeared to be loggerheads). The time it took for turtles to escape, once encountering the TED, ranged from 12 seconds to 1 minute and 11 seconds. Based on estimation of carapace length, NMFS believes that both adult and sub-adult turtles were represented in the sample.

Comment 11: Some shrimp fishermen believe that the shrimp

loss data gathered by NMFS on the double cover flap TED are flawed in many respects, including: (1) the tests were not conducted in areas representative of where they fish; (2) sample sizes were too small to be statistically valid; (3) the tests were done outside the shrimping season with low catch rates and low loads in the bag end. Higher loads would cause more water to back up and force open the flap and cause additional shrimp loss.

Response: Since publication of the proposed rule, NMFS conducted further testing of the double cover flap TED. From January through August, 2002, the double cover flap TED has been tested against current commercially available TEDs for shrimp loss aboard 12 commercial shrimp trawlers in the Gulf Area, and one trawler in the Atlantic Area. In the Gulf Area, 7 vessels fished in inshore and near shore areas (2 in Texas, 2 in Louisiana, 1 in Mississippi, 1 in Alabama and 1 in Florida). Offshore testing was conducted along the northeast coast of Florida by one vessel, the pink shrimp grounds of southwest Florida by two vessels, Louisiana by two vessels and Texas by one vessel. In order to obtain statistically valid data, a minimum of 20 comparative tows were conducted during each trip. Testing has included the shrimp season openings in Texas, Louisiana, and Mississippi. A total of 305 comparative tows were conducted. The double cover flap TED experienced a 0.1 percent shrimp gain when compared to current commercially available TEDs, which is

not statistically different from zero.

Excessive shrimp loss due to back washing and large catch loads were not experienced during the tests to date. Additionally, several vessel captains have remarked that the double cover flap appears to work better in excluding debris such as sticks, grass, and jellyfish.

Comment 12: Fishermen were concerned about missing data on shrimp loss estimates used in the proposed rule. They allege the NMFS report on shrimp loss data did not contain information from 58 tows comparing shrimp loss between the modification and standard TEDs and that the lack of providing data from all observed tows may reflect selective reporting. They also believe the report lacked information on trawl sizes used during the tests and the size of the shrimp that were caught.

Response: The data set in question resulted from testing conducted in 2000. That data set did not include unsuccessful tows. Unsuccessful tows are those that include problems which would bias the data in a manner unrelated to the TED, i.e., fouled tickler chain, torn nets, and catches dumped together. As a result, data gathered from such tows can not be used to make a judgment on the functioning of the TED. The 58 tows referenced in this comment had one or more of these problems and were therefore not included in the data set. However, all tows are recorded by the observer and any problems are noted. These

records are archived and are available upon request.

Shrimp size is not always recorded by the observer. The database may provide shrimp size for selected trips and can be queried upon request. Trawl sizes varied depending on the captain of the vessel; however, during comparative tows, the size and type of each trawl used during a tow were the same for the control TED and the experimental TED.

Comment 13: Various state agencies and fishermen indicate that large turtles are not found in their state waters. Since 1968, three turtles were recorded caught in shrimp trawl nets during independent fishery trawl surveys conducted in state waters by Alabama, Mississippi, Louisiana and Texas.

Response: NMFS does not agree that the lack of sea turtle captures in state waters during fishery independent sampling represents an absence of sea turtles. Stranding information, observed captures, and survey data indicate that large loggerhead and leatherback turtles can be found in Alabama, Mississippi, Louisiana, and Texas state waters.

The fishery independent sampling that is the subject of these comments is conducted mostly with small trawls of 16 ft. (5 m) or less (although a small percentage were conducted with 40-ft. (12-m) trawls), with short tow times (10 to 15 minutes) which reduce the probability that the trawls would catch sea turtles. The purpose of these sampling programs is generally to record

target catch and finfish bycatch and, therefore, are not necessarily representative of shrimp fishing effort and/or areas fished. However, NMFS did consider this information and researched the possibility of allowing the use of smaller TED sizes in all Gulf state waters. Based on the information below, leatherbacks occur in all offshore waters which warrants the use of a TED capable of releasing them.

Strandings in inshore waters likely are underestimated due to the difficulty in surveying areas that generally are marshlands or do not have sandy beaches. For the same reasons, offshore strandings on much of the coastline of Louisiana are underestimated.

The greatest proportion of loggerheads stranding that are too large to fit through current TED openings is in the Gulf Area, where the current minimum height opening is 10 inches (25 cm) (compared to 12 inches (31 cm) in the Atlantic Area). In the western Gulf of Mexico, an annual average of 63 percent of stranded loggerheads offshore and 48 percent of stranded loggerheads inshore were larger than the dimensions of the current minimum TED opening. In the eastern Gulf of Mexico, the values are 89 percent offshore and 80 percent inshore. The proportions are less in the Atlantic Area: 27 percent offshore and 17 percent inshore, but because the number of turtles stranding in the Atlantic Area is higher, the actual number of

animals too large to fit through the openings is comparable to the number of strandings that are too large in the Gulf Area. Based on 1995-99 data, each year approximately 250 loggerheads that are too large to fit through existing TED openings strand in each area; approximately 13 percent of these occur in inshore waters. Based on strandings, reported incidental captures, NMFS Beaufort project, Cooperative Marine Turtle Tagging, N.C. public sightings, observer data (Gulf and South Atlantic Fisheries Development Foundation and NMFS), aerial surveys (SETS, Pascagoula Oil Platform Association data, GOM red drum surveys of 1987, 1995, and 1999, NEFSC 1995 and 1998 surveys, CETAP, SEAS92 and SECAS95, MATS95, GulfCet I, GulfCet II, and GoMex surveys), and telemetry tracks, loggerheads are distributed ubiquitously in the Southeast United States, generally occurring in all areas, inshore and offshore, and at all times when shrimp trawling activity is likely to occur.

Leatherback turtles are distributed throughout the Southeast United States, but are not as abundant as loggerheads. Leatherbacks are predominantly found in offshore waters but infrequently enter inshore waters. In the Gulf Area, 8 percent of leatherbacks stranding were found on inshore beaches and in the Atlantic Area 11 percent were reported from inshore waters. The actual number of turtles stranding in inshore waters, however, is small: seven in the Gulf Area from 1995-1999 and 21

in the Atlantic Area for the same time period, for an average of six leatherback turtles stranding annually in southeast inshore waters. Based on the same information used for loggerhead turtles above, leatherbacks occur offshore during all seasons when shrimp trawling activity is expected to occur. The number of strandings on offshore beaches is significantly more than in inshore waters: the average is 56 animals per year in the Atlantic and Gulf Areas offshore beaches combined.

This information is discussed in greater detail in Appendix A of the environmental assessment prepared for this final rule, which can be obtained from NMFS (see ADDRESSES).

Comment 14: Fishermen believe that better abundance and distribution data on sea turtles are needed, and that NMFS should identify an acceptable level of strandings. They have observed more turtles today than ever before and anticipate an increase in interactions.

Response: NMFS agrees that increases in stranding levels may be related to increases in certain turtle populations, but the populations of particular concern for this final rule - leatherbacks and northern subpopulation loggerheads- are not increasing. In addition, there are many other factors that could cause strandings to increase including a change in fishing practices. NMFS is unable to identify a stranding level that would trigger an adjustment to management measures. In their

1998 report to NMFS, the Turtle Expert Working Group (TEWG) analyzed existing data on the population status and trends of the loggerhead and Kemp's ridley turtles. The TEWG concluded that an estimation, derived from stranding data, of the maximum number of individual loggerheads or Kemp's ridleys that can be taken incidentally to commercial fishing could not be made. The TEWG determined that strandings were an underestimate of nearshore mortality and were inadequate for determining the population's actual status. Recovery goals for the Atlantic populations are identified in the joint NMFS and U.S. Fish and Wildlife ESA Recovery Plans completed in the early 1990s (see ADDRESSES for copies or visit <http://www.nmfs.noaa.gov/endangered.htm>). NMFS agrees that data on abundance and distribution can be improved. NMFS is currently supporting in-water population studies in Florida and North Carolina. NMFS also conducted a pilot aerial survey for loggerhead and leatherback turtles in the coastal waters of the Mid-Atlantic in July 2000, to investigate whether line transect methodology can be used to produce precise estimates of marine turtle abundance. NMFS intends to revise the existing recovery plans in the near future. These revisions will likely include additional research recommendations to improve our understanding of turtle abundance and distribution.

Comment 15: Fishermen are concerned that data are lacking on the causal relationship between strandings and shrimp fishing.

For example, in May of 2000, 22 turtles stranded along the South Carolina coast while the shrimp fishery was operating. Yet in May 2001, 21 turtles stranded along that coast in the absence of shrimp fishing. They stated that recreational fishers and boaters, habitat loss, and pollution are all sources of strandings.

Response: NMFS agrees there are many causes that contribute to strandings. Causes include, but are not limited to, diseases, boat strikes, ingestion of marine debris, dredging, power plant entrainment, and incidental capture in fisheries. The cause of death can only be determined in a limited number of cases such as when gear is associated with the carcass. However, there are other sources of data that provide substantial evidence to indicate that shrimp trawling is the main contributing factor to sea turtle mortality (Magnuson et al., 1990; Caillouet et al., 1991, 1996; Crowder et al., 1995; TEWG, 2000). In 1989, a Committee on Sea Turtle Conservation was formed under the auspices of the National Research Council (NRC). The charge to NRC was to review the scientific and technical information pertaining to the conservation of sea turtles and the causes and significance of turtle mortality. The NRC found that, "Of all known factors, by far the most important source of death was the incidental capture of turtles (especially loggerheads and Kemp's ridleys) in shrimp trawling." The NRC report is based on

numerous data sources including shrimping effort correlations with stranding levels, independent trawl surveys, and tags returned from turtles that were incidentally captured in shrimp trawl nets. In addition to the NRC report, NMFS' observers have documented incidental capture of sea turtles in shrimp trawl nets throughout the southeastern Atlantic Ocean and Gulf of Mexico. The NMFS Shrimp Trawl Observer Program observed 2,833 sea days between January 2000 and May 2002. During this time NMFS observers documented the incidental capture of 49 sea turtles. These turtles were captured in various locations (4 were captured in the offshore waters of Texas, 5 in the offshore waters of Alabama, 1 in the nearshore waters (state waters) of Alabama, 5 in the nearshore waters of South Carolina, 1 in the offshore waters of Louisiana, 2 in the nearshore waters of Louisiana, 2 in the nearshore waters of Mississippi, 4 in the offshore waters of eastern Florida, 14 in the nearshore waters of western Florida, and 10 in the offshore waters of western Florida).

The November 2000 TEWG report cites studies that show that the use of TEDs has significantly reduced strandings over the period 1980-1997 by an estimated 40 percent in South Carolina and 58 percent in Georgia, relative to strandings estimates without TEDs. The TEWG also indicates that a significant TED effect on strandings is detectable through the time series analysis of biweekly data, in spite of the increasing trend in annual

strandings. Recent work in Georgia that takes shrimp landings into account show strandings per unit of shrimp catch were reduced 37 percent with the use of TEDs.

Comment 16: Some environmental groups and state agencies commented that data collected from key nesting beaches in the Atlantic Ocean indicate that the leatherback turtle nesting population may be declining. Globally, leatherbacks are experiencing a severe decline. They also state that the northern nesting population of loggerhead turtles has declined and the portion of the northern nesting population that nests in South Carolina has decreased by as much as 47 percent in the past 20 years. Therefore, they allege that large TEDs are essential to ensure the recovery of these species. Large TEDs allow large juvenile and sexually mature loggerheads and green turtles, as well as leatherback turtles to escape and decrease escape times for all turtles thereby making TEDs more effective.

Response: NMFS is requiring larger openings of TEDs as described in the Summary of the Final Rule and the Provisions and Justification of the Final Rule section of this notice.

Comment 17: Fishermen believe that current data do not justify the use of these larger TEDs in all areas and times. The year-round use of the leatherback TED is unnecessary. Additional research is necessary to ensure that burdens are not placed on the industry without a corresponding benefit to turtles.

Response: Data from multiple sources, including at-sea observer programs, aerial sightings, public reports, incidental captures and strandings documented through the Sea Turtle Stranding and Salvage Network (STSSN), support the use of a TED capable of releasing leatherback turtles in all offshore waters and a TED capable of releasing large loggerhead turtles throughout the southeastern Atlantic Ocean and Gulf of Mexico. Loggerheads are documented in all inshore and offshore areas, whereas leatherbacks are predominantly found in offshore waters but infrequently enter inshore waters. Additionally, both loggerheads and leatherbacks occur in shrimping areas during all seasons when shrimp trawling activity is expected to occur (see NMFS response to Comment 13).

Comment 18: The Gulf and South Atlantic Fisheries Foundation states that there must be appropriate resources to conduct a comprehensive industry review of turtle information and perform analysis of the massive data sets. This would include stock assessment evaluations and economic analysis.

Response: A significant amount of available data were reviewed by the NRC when they made their 1990 findings (see comment 15). The latest stock assessment on the leatherback and loggerhead turtles conducted by NMFS (National Marine Fisheries Service Southeast Fisheries Science Center, 2001) was extensively reviewed by an independent peer review process - UM Independent

System for Peer Reviews - whose findings supported the quality of the stock assessment and can be obtained upon request (see ADDRESSES).

Comment 19: Environmental organizations believe that the effects on sea turtle populations as a result of inadequate TEDs far outweigh the impacts that may occur on nesting beaches; whereas, fishermen believe that nesting beach and nest protection should be stressed before new regulations on fishermen take place.

Response: NMFS shares responsibility with the U.S. Fish and Wildlife Service (USFWS) for sea turtle recovery actions under the ESA. NMFS is responsible for addressing threats in the marine environment while the USFWS oversees recovery actions on the nesting beaches. As outlined in all of the Atlantic sea turtle joint ESA Recovery Plans, both threats on the nesting beaches and in the marine environment must be addressed in order to recover these listed species. Programs to protect nests and hatchlings have been ongoing for many years. A primary example is the joint Mexico/U.S. protection program for Kemp's ridleys at Rancho Nuevo that began in the late 1970s. Nesting beaches throughout the southeastern U.S. are protected by the states, Department of Interior, Department of Defense, and the public. NMFS must continue to reduce incidental capture in shrimp trawl

fisheries when data support that modifications to existing TED requirements are necessary.

Comment 20: Environmental organizations feel it is illegal for NMFS to imperil threatened and endangered species by delaying the implementation of this final rule to alleviate short-term economic impacts. They believe that the provisions of the proposed rule should be implemented as is, without the 1-year delay.

Response: This final rule will be implemented for the Atlantic Area on April 15, 2003, and for the Gulf Area 6 months after its publication in the Federal Register. NMFS believes that the 6-month delay in the Gulf Area is appropriate because fishermen in the Gulf Area use smaller TEDs with smaller grids than fishermen in the Atlantic Area, and the Gulf Area also has the majority of hooped hard TED users, bait shrimpers, and weedless TED users. Most fishermen in the Atlantic have been subject to the implementation of the leatherback contingency plan and likely already have the equipment to comply with the new regulations. The GA DNR reports that many shrimpers (up to 60 percent) use the leatherback TED year-round. Net shops in the Atlantic Area are more likely to stock the required equipment. Net shops in the Gulf Area will need additional time to supply the equipment necessary to comply with these new regulations. In addition, the six months will provide opportunity to evaluate

preliminary results from the Gulf and South Atlantic Fisheries Foundation study on the shrimp fishery and sea turtles. In the proposed rule, NMFS had initially discussed a 12-month delay in implementation. In light of the additional time allowed for public comment, NMFS now believes that an additional 12-month delay is not warranted.

Comment 21: State agencies from Mississippi, Alabama, Louisiana and Texas believe that their bait shrimp industries are tightly regulated by state laws and additional Federal regulations are unnecessary. Texas Parks and Wildlife believes that the new regulations would require the state to make major changes to their license program to provide bait-only licenses.

Response: NMFS enforcement and gear specialists have seen an increase in boats claiming to be bait shrimpers but possessing more than 32 lb (14.5 kg) of dead shrimp. Increased tow times are necessary to land this much dead shrimp. Longer tow times would increase the likelihood of entangling a sea turtle and, without a TED installed, increase the chance of injury or mortality. When there is no incentive to limit tow times as a part of normal fishing operations, tow time limits are extremely difficult to enforce. Also, the possession of both bait and food shrimping licenses aboard the same vessel may allow such vessels to exploit the bait shrimping exemption as a loophole. Therefore, NMFS is limiting the bait shrimp TED exemption to

shrimpers with a valid state bait-shrimp license for which such state license allows the licensed vessel to participate in the bait shrimp fishery only.

The new requirements for bait shrimpers should not affect state programs that have separate bait and food shrimp licenses. The new requirements do not eliminate dual-license programs; rather, dual-license holders will be required to use a TED. Texas Parks and Wildlife can decide whether or not a separate bait-only license is warranted to allow bait shrimpers to fish without a TED.

Comment 22: Environmental groups believe that TEDs should be required on all try nets. Tow time limitations do not work and are unenforceable.

Response: Sea turtles are captured in try nets. The NMFS observer program from 1992 through 1995 documented that try nets accounted for 43 percent of the observed turtle captures. In 2001, shrimpers operating in the Atlantic Area reported capturing more than 20 turtles in their smaller try nets without TEDs installed. NMFS required shrimpers deploying try nets with head rope lengths greater than 12 ft. (3.6 m) or foot rope length greater than 15 ft. (4.6 m) to have a TED installed but exempted the smaller try nets (61 FR 66933, December 19, 1996). Experimental trawling completed in 1994 and 1996 indicated that small try nets (\leq 12 ft. (3.6 m)) were less likely to catch

turtles. A total of 100 tows deploying three sizes of try net, 12 ft. (3.6 m), 15 ft. (4.6 m), and 20 ft. (6.2 m), were conducted in Cape Canaveral Ship Channel. Thirty-five turtles were caught. Of these, 17 were caught in the 20-ft. (6.2-m) net, 10 in the 15-ft (4.6-m) net, and 8 in the 12-ft (3.6-m) net. NMFS believes that when used as intended, small try nets pose little threat to turtles. NMFS initially issued this exemption without tow time restrictions because it felt that this type of gear naturally lent itself to short tow times. However, information from GADNR indicates that some fishermen are using try nets as another fishing trawl, towing it for long periods of time. NMFS will continue to monitor this issue. If tow time limitations do not prevent the capture of sea turtles in try nets, then NMFS will consider other alternatives, such as requiring TEDs in all try nets.

Comment 23: Environmental organizations believe that NMFS should allocate adequate funding toward ensuring shrimpers' compliance with these regulations. They believe that one way to accomplish this is to increase enforcement personnel. They also believe that NMFS should establish a mandatory observer program to cover a representative sample of shrimp vessels in the southeastern United States.

Response: NOAA Enforcement, in partnership with the USCG and deputized state law enforcement agencies, have been

successful in enforcing these regulations. Further, based on information from these agencies, the vast majority of fishermen follow the regulations.

The NMFS Shrimp Trawl Bycatch Observer Program has observed over 2,800 sea days on shrimp trawl vessels since 2000. This level of observer coverage is expected to continue in the future. NMFS is required to have observer coverage for the shrimp fishery, but the sampling is inadequate, given fleet size. Because of the massive size of the shrimp fleet and the amount of resources (funding and personnel) it would require, the establishment of a sampling program that would result in precise estimates of turtle bycatch has not been possible. Currently, limited resources are focused on specific issues that need evaluation such as testing new TED designs and BRDs.

Comment 24: Fishermen from Alabama, Mississippi, and Louisiana have complied with current TED regulations and additional burdens should not be placed on them without adequate data to support the new requirements.

Response: Shrimpers in the southeastern United States have made great contributions to the protection of endangered species through their use of TEDs over the last decade and more. Those efforts have borne fruit, as evidenced by the population increases of the critically endangered Kemp's ridley turtles, which are small enough to escape through the current TEDs.

However, studies have shown that 33-47 percent of the loggerhead turtles stranded throughout the southeastern United States are too large to fit through the current TED openings. This is a much greater percentage than this size group represents in the population at large. The continued disproportionate loss of this size class will seriously hamper recovery efforts for this species, and might require change in its status from threatened to endangered. Leatherback turtles are severely endangered throughout the world. Nesting numbers on their main nesting beach in the western north Atlantic have decreased by 15 to 17 percent per year since 1987. NMFS believes that increasing the size of current TED openings is necessary to ensure the conservation and recovery of these listed species.

Comment 25: Eight years ago the shrimp fishing industry offered a well-funded plan for turtle recovery that included money to protect nesting beaches in Mexico and helped to fund the head start program, in lieu of TEDs, but NMFS would not accept it. Fishermen are willing to pay to protect sea turtles and protect eggs and nests in lieu of TEDs. The money can go to protect nesting beaches and hatch eggs to release into the wild.

Response: Nesting beach habitat conservation plays an important role in the recovery of sea turtles. However, the protection of turtles in the water is equally important. The use of TEDs is a major factor in the recent population increase of

Kemp's ridley turtles. Kemp's ridleys are the smallest sea turtles, and adult size animals can pass through the current TED openings. Since 1990, corresponding with the more widespread use of TEDs in U.S. waters, the total annual mortality (including natural mortality) of Kemp's ridleys has been reduced by 44-50 percent. At the same time, nesting has gone from 700-800 nests per year in the late 1980s to approximately 6,000 nests in 2000. This kind of increase in nesting numbers could not have happened without in-water protection provided by TEDs. NMFS believes that the use of TEDs can have a significant impact on the survival and recovery of sea turtles. The majority of loggerhead turtles nesting in the United States takes place on the east coast, where there is comprehensive nesting beach and nest protection. Even with these comprehensive conservation and protection programs in place, the northern nesting population of loggerhead sea turtles (from northeast Florida north) is at best stable and possibly declining, demonstrating that in-water protection of sea turtles is still required to achieve recovery.

Comment 26: Fishermen and environmental organizations believe that NMFS should investigate the impact of recreational shrimping on sea turtles. Recreational trawls may reach 16 ft. (4.88 m) in width with a fleet estimated at 8,000 boats. At 16 ft. (4.88 m) these trawls are the same size as trawl nets which already require TEDs.

Response: The majority of recreational shrimp fishermen pull their trawls out of the water by hand, and this naturally limits the size of the trawl and the tow times (a large full net would not be able to be retrieved by hand). They must also use tow times as specified at 50 CFR 223.206(d)(3)(i). NMFS believes this fishery poses little threat to sea turtles because of the combination of short tow times and small trawls. Any recreational fisherman who does not pull his or her trawl in by hand must use a TED.

Comment 27: Members of the United States Congress commented that food safety is a national security issue and the proposed rule may result in the United States becoming more dependent on foreign produced foods at a time of national hazard.

Response: NMFS believes regulations to increase the size of current TED openings would allow for adequate protection of listed species, possibly avoiding the curtailment of the shrimp fishery in the southeastern United States, and thus allowing the shrimp fishery to continue to harvest shrimp.

Comment 28: Fishermen believe that NMFS' method for announcing and convening public hearings for the proposed rule was inadequate. NMFS should do direct mailings of notices to shrimpers by using lists that the state agencies have from selling shrimp licenses.

Response: While NMFS procedures for public notification satisfy legal requirements, NMFS agrees that public notification of our proposed actions could be improved. NMFS increased coordination with affected entities, by extending the public comment period on the proposed rule by 90 days, funding a major industry workshop in Tampa, FL, and participating in three industry-sponsored meetings in Louisiana. NMFS is currently developing a mailing list based on public hearing participation to distribute information on future meetings and notices to the people these actions affect.

Provisions and Justification for the Final Rule

NMFS is adopting the proposed measures as a final rule with the changes specified below, based on a review of the public comments and additional analyses of biological and commercial information. The changes to the proposed rule consist of specifying different TED-openings and configurations for inshore and offshore waters and allowing the use of accelerator funnels, hooped hard TEDs, and weedless TEDs with modifications. Once the final rule is published in the Federal Register the changes will be effective April 15, 2003, in the Atlantic Area and after 6 months in the Gulf Area.

Summary of the Final Rule

The final amendments to the TED regulations are applicable to trawling in all inshore and offshore waters of the

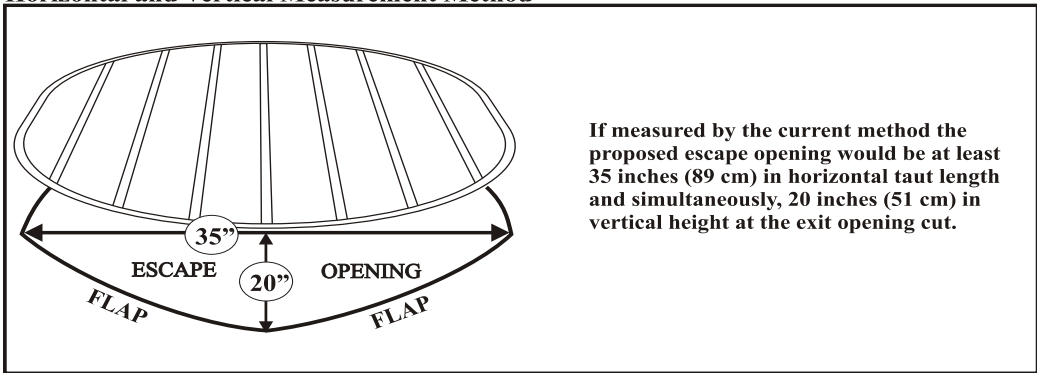
southeastern United States as follows: (a) Require all hard TEDs to have a grid with a minimum outside measurement of 32 inches (81-cm) by 32 inches (81-cm); (b) require the use of either the double cover flap TED, a TED with a minimum opening of 71 inch (180 cm) straight-line stretched mesh, or the Parker soft TED with a minimum 96-inch (244-cm) opening in offshore waters (from the COLREGS demarcation line seaward) and in all inshore waters off of Georgia and South Carolina; and require a TED-opening in all inshore waters (from the COLREGS Demarcation line landward) except for the inshore waters of Georgia and South Carolina of at least 44-inch (112-cm) straight-line stretched mesh measurement with a 20-inch (51-cm) vertical taut height, with each measurement taken separately on all hard TEDs (see Figure 1) or a Parker soft TED with a 56-inch (142-cm) opening; (c) disallow the use of the hooped hard TED in all offshore waters and in the inshore waters of Georgia and South Carolina; and allow a hooped hard TED in inshore waters, other than Georgia and South Carolina, to have a minimum size of 35 inches (89 cm) by 27 inches (67 cm) on the top opening, with a minimum inside horizontal measurement of at least 35 inches (89 cm) and an inside vertical measurement of at least 30 inches (76 cm) on the front hoop, with a clearance between the deflector bars and the inside of the front hoop no less than 20 inches (51 cm); (d) eliminate the special regulations for the leatherback

conservation zone and for flaps on bottom opening TEDs in the shrimp fishery sea turtle conservation areas (SFSTCA); (e) disallow the use of the Jones TED; (f) allow the use of the weedless TED with a brace bar; (g) require all accelerator funnels to have a stretched mesh opening of no less than 44 inches (112 cm) in the 44-inch (112-cm) TED and no less than 71 inches (180 cm) in the 71-inch (180-cm) TED and the double cover flap TED; (h) require bait shrimpers to use TEDs in states where a state-issued bait shrimp license holder can also fish for food shrimp from the same vessel; (i) require the use of tow times on small trawl nets; and (k) change the language of the flounder TED rule to clarify that the new escape opening sizes are not required in the Atlantic summer flounder bottom trawl fishery as a result of this rule change, although the agency is currently evaluating the need for such restrictions.

The justification for the changes and adoption of the final modifications to the TED regulations are discussed below for each measure.

44 inch (112 cm) Inshore Opening

Proposed Dimensions Using the Current Simultaneous Horizontal and Vertical Measurement Method



The Proposed Dimensions Using the Proposed Separate Horizontal and Vertical Measurement Method

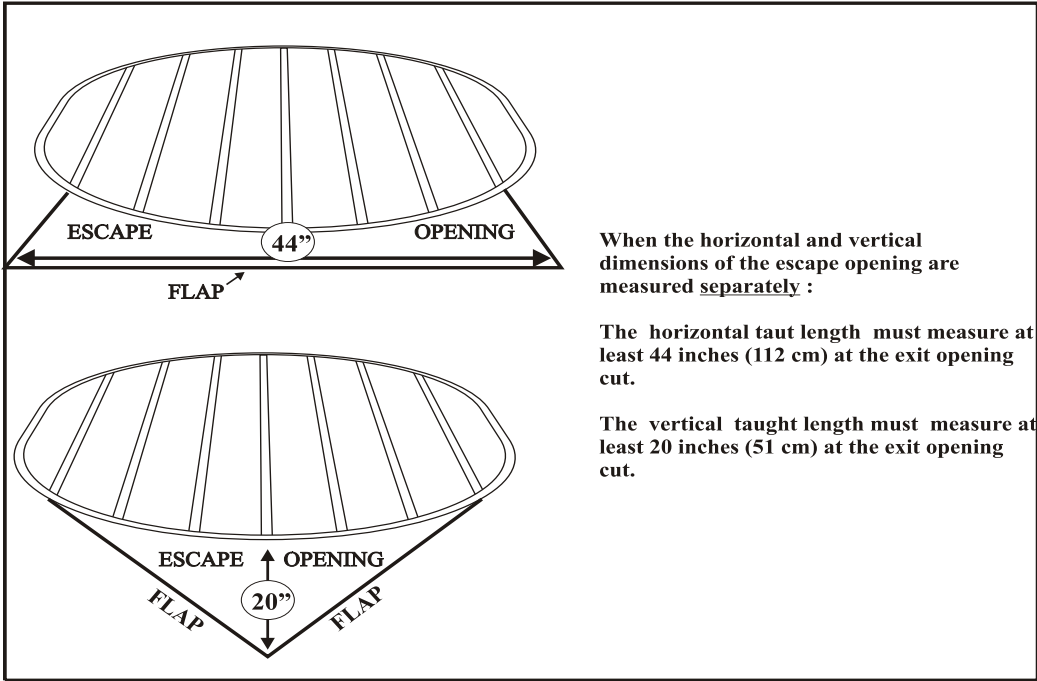


Figure 1

Increase of the Minimum Size of TED Grids and TED Openings in all Inshore and Offshore Waters of the Southeastern United States

The 71-inch (180-cm) TED, the double cover flap TED, the Parker soft TED with a 96-inch (244-cm) opening, the Parker soft TED with the 56-inch (142-cm) opening and the 44-inch (112-cm) TED are large enough to exclude 100 percent of nesting loggerhead and green turtles based on the information in Epperly and Teas (2002) and the measurements of nesting loggerhead turtles taken by the South Carolina Department of Natural Resources (SCDNR) in the spring and summer of 2000 as referenced in the proposed rule (66 FR 50148). This is particularly important for loggerhead turtles, as population models indicate that a reduction in mortality in these size classes would result in the greatest annual population increase rate (Crouse et al., 1987; Hopewell, 1998).

Leatherback turtles are too large to fit through the current size TED openings; when mature, they can weigh between 600 and 1,300 lb (273 and 591 kg). The use of the 71-inch (180-cm) TED, the double cover flap TED, and the Parker soft TED with a 96-inch (244-cm) opening in all offshore waters in the southeastern United States and the inshore of Georgia and South Carolina will ensure the use of TEDs capable of releasing leatherback turtles in the waters where they are most commonly found and in areas and times not currently covered by the leatherback contingency plan.

This final rule eliminates the unplanned, temporary actions implemented under the leatherback conservation zone which will increase predictability for the industry. NMFS believes that the inshore waters of Georgia and South Carolina have a higher potential for the presence of leatherback turtles because they are mostly open sounds with little barrier from nearshore oceanic habitat.

See NMFS response to comment 13 in this document for a summary of the aerial, standings, observer, and other data used to support this rule.

Disallowing the use of the Hooped Hard TED in all Offshore Waters in the Atlantic and Gulf Areas and Changing the Description of a Hooped Hard TED for Use in Inshore Waters

Based on information received from Louisiana fishermen and NMFS gear specialists, the hooped hard TED known as the Coulon TED may work well as a bycatch reduction device. NMFS was considering disallowing the use of hooped hard TEDs in all waters in the proposed rule because of enforcement problems seen with this type of fixed-angle TED installed backwards. Based on the information in Epperly and Teas (2002), and the measurements of nesting loggerheads conducted by the SCDNR in the summer of 2000, the modifications to the hooped hard TED that are part of this rule will give this TED an escape opening large enough to exclude

large loggerhead turtles found in inshore waters, which will allow its continued use by some of the fishermen who prefer it.

NMFS is not allowing the use of the hooped hard TED in offshore waters because the design cannot be modified to be large enough to exclude leatherback turtles.

Weedless TEDs; Jones TEDs; and Accelerator Funnels

The structural integrity of the weedless and Jones TEDs does not hold up under commercial use; grid bars bend toward the back of the net. This condition has been shown to severely limit the ability of these TEDs to exclude turtles. Therefore, NMFS is requiring the use of a brace bar to increase the structural integrity of the weedless TED and is disallowing the use of the Jones TED. The brace bar for the weedless TED must be constructed of the same or stronger material as the deflector bars and must be attached across the deflector bars in an area defined by the mid point of the outer frame, and the unattached ends of the deflector bars. The horizontal brace bar may be offset from the deflector bars, using spacers constructed of the same or stronger material. The spacers may not exceed 3 inches in length. The Jones TED can not be practically strengthened with a brace bar.

In the proposed rule NMFS proposed disallowing the use of the accelerator funnel in the 71-inch (180-cm) TED and the double cover flap TED. To exclude large turtles, we felt that the

funnel would have to be of such a large size that it would not accelerate water and may hang out the flap causing shrimp loss. However, based on information from fishermen and further investigation by NMFS gear technicians, NMFS found that an accelerator funnel that is large enough to release leatherback and large loggerhead turtles will work in the single grid hard TEDs approved for use in this rule. Accelerator funnels used in the 71-inch (180-cm) TED and the double cover flap TED must be attached according to the current rules and must have an opening of at least 71 inches (180 cm) stretched mesh. Accelerator funnels used in the 44-inch (112-cm) TED must also be attached according to the current rules and must have an opening of at least 44 inches (112 cm) stretched mesh.

Requiring Bait Shrimpers to use TEDs in States Where a State-issued Bait Shrimp License Holder can also Fish for Food Shrimp From the Same Vessel

NMFS enforcement and gear specialists have seen an increase in boats claiming to be bait shrimpers but possessing more than 32 lb (14.5 kg) of dead shrimp. These dead shrimp are likely sold as food shrimp. Landing this much dead shrimp was likely the result of an increase in tow times beyond the shorter tows used to catch live bait. Longer tow times would increase the likelihood of entangling a sea turtle and, without a TED installed, increase the chance of injury or mortality. When

there is no incentive to limit tow times as a part of normal fishing operations, tow time limits are extremely difficult to enforce. Also, the possession of both bait and food shrimping licenses aboard the same vessel may allow such vessels to exploit the bait shrimping exemption as a loophole. Therefore, NMFS is limiting the bait shrimp TED exemption to shrimpers with a valid state bait-shrimp license for which such state license allows the licensed vessel to participate in the bait shrimp fishery only.

Requiring the Use of Tow Times on Small Try Nets

Although sea turtles have been documented as having been captured in try nets, experimental trawling completed in 1994 and 1996 indicated that small try nets were much less likely to catch turtles. However, as discussed in NMFS' response to comment 22, turtle captures in try nets may still be a problem. NMFS believes that tow time restrictions will give NMFS an enforcement mechanism to help maintain compliance by the small number of fishermen who do not use try nets as intended. However, NMFS will continue to evaluate this issue. If tow time restrictions do not prevent capture of sea turtles in try nets, then NMFS will evaluate other options, including requiring TEDs in try nets.

Classification

This final rule has been determined to be significant for purposes of Executive Order 12866.

The ESA provides the statutory basis for this final rule.

NMFS prepared a draft Environmental Assessment/Regulatory Impact Review/Regulatory Flexibility Act Analysis (EA/RIR/RFAA) for the proposed rule that discussed the impact on the environment as a result of the proposed rule. NMFS completed a final Environmental Assessment/Regulatory Impact Review/Final Regulatory Flexibility Analysis (EA/RIR/FRFA) based on comments received during the comment period. A copy of the final EA/RIR/FRFA is available from NMFS (see ADDRESSES).

NMFS completed the FRFA, pursuant to 5 U.S.C. 604, without regard to whether the proposal would have a significant impact on a substantial number of small entities. A summary of this FRFA follows:

The Endangered Species Act provides the statutory basis for this final rule. This final rule will require the use of an approved leatherback TED in all shrimp trawl nets operated in all offshore waters and the inshore waters of Georgia and South Carolina at all times; require the use of an approved loggerhead TED in all shrimp trawls licensed or fishing for food shrimp in all inshore waters at all times; allow the use of the weedless TED with a brace bar; allow the use of hooped hard TEDs in inshore waters with modifications; allow the use of accelerator funnels with certain modifications; and require tow time restrictions on try nets.

The objectives of this final rule are to decrease the mortality of large loggerhead and green turtles; decrease the mortality of large leatherback turtles; decrease the mortality of all threatened and endangered sea turtles incidentally taken by shrimp trawl activity by eliminating TEDs that are not sufficiently effective in releasing sea turtles; improve the enforcement of existing TED regulations; and implement a more efficient and effective management scheme with respect to conserving large leatherback turtles.

An excessive number of endangered or threatened sea turtles are dying each year due to probable interaction with shrimp trawl gear. The Leatherback Contingency Plan with its required surveys and use of emergency rules that close areas to trawl activity to reduce sea turtle mortality has been shown to be inefficient. An alternative management approach is required to both address the excessive mortality of sea turtles and eliminate the need for costly and disruptive closures.

This final rule will impact the Southeast shrimp trawl fishery primarily through the imposition of increased costs associated with the purchase and maintenance of the required gear and through lost revenue opportunities through potential increased shrimp losses associated with the gear.

A fish harvesting business is considered a small business if it is independently owned and operated and not dominant in its

field of operation, and if it has annual receipts not in excess of \$3.5 million. Based on a compilation of data from the shrimp landings file for the Gulf, Florida trip ticket data, and data from the Georgia shrimp landings system, the maximum known gross revenue for an individual fishing craft in the Gulf and South Atlantic shrimp fisheries in 1999 was approximately \$723,656. While this figure could be an underestimate of the true maximum value since currently available data do not allow all shrimp landings from different parts of the region and their associated revenues to be linked to a particular fishing craft, this figure is sufficiently less than \$3.5 million to support the presumption that all firms in the Gulf and South Atlantic shrimp trawl fisheries are small business entities.

It is estimated that 11,244 small vessels (vessels less than or equal to 60 ft. (18.3 m)) and 2,368 large vessels (vessels greater than 60 ft. (18.3 m)), or a total of 13,572 vessels operate in the Southeast shrimp trawl fishery. Note that this figure does not include fishing craft that are licensed or known to only participate in shrimp fisheries that use non-trawl gear (i.e., butterfly nets, channel nets, cast nets, skimmer nets, etc.) since these gear types are not subject to the existing or proposed TED requirements. Small vessels in the Southeast shrimp trawl fishery are estimated to harvest an average of 4,752 lb. (2,155.5 kg) of shrimp annually valued at \$12,435 in gross

revenues, with average variable cost expenditures of \$8,708 and generating a profit of \$3,727. Large vessels in the Southeast shrimp trawl

fishery are estimated to harvest an average of 42,656 pounds of shrimp annually valued at \$142,880 in gross revenues, with average variable cost expenditures of \$126,089 and generating a profit of \$16,089.

Although all participants in the fishery may be affected by the proposed action, it should be noted that the provisions on weedless TEDs and hooped hard TEDs will also be expected to affect specific subsets of the industry. The weedless TED is used by approximately 15 percent of Texas shrimpers in the trawl fishery. Therefore, using the estimate of the 2,355 vessels reporting landings in Texas, 353 vessels would be affected by the weedless TED specifications. With respect to the hooped hard TEDs, it is estimated that 300 vessels currently utilize this gear.

This final rule is expected to decrease annual ex-vessel shrimp gross revenues by \$1.8-\$7.3 million, reduce variable costs (due to the change in the relative numbers of small vessels vs. large vessels) of production by \$1.4-\$3.7 million, and reduce profits by \$444,000-\$3.6 million. Ex-vessel shrimp prices are projected to increase, due to the decline in domestic shrimp harvest, by 0.7-1.7 percent per year. The proposed action is

expected to result in a less than 1.0 percent loss in landings, gross revenues and profits in the Southeast shrimp trawl fishery, and result in a maximum loss of employment opportunities of 5.1 percent in the small vessel fleet and 0.5 percent in the large vessel fleet. The small vessel fleet is expected to contract by 400-574 vessels by 2006 relative to status quo conditions as a result of the rule, while the large vessel fleet is expected to contract by up to 11 vessels, also as a result of the rule. The change in average annual profits for the average small business entity operating in the Southeast shrimp trawl fishery due to the proposed action is expected to range from a gain in profits of 0.5 percent to a loss in profits of 2.4 percent over status quo conditions.

NMFS received the following comments regarding economic impacts of the rule through public comment on the proposed rule: (1) The projected cost to retrofit TEDs is too low; (2) the 20-percent profit margin used is too high; (3) the cumulative loss of shrimp as a result of the proposed changes in addition to existing requirements is not considered; (4) an analysis of possible shrimp loss due to the prohibition of accelerator funnels is lacking; (5) the analysis of the economic impact to small businesses is inadequate; (6) the percent shrimp loss is too low and should be 15 to 20 percent; (7) information on gear replacement frequency is inaccurate; and (8) the analysis does

not consider the effects the rule will have on fishermen in combination with depressed shrimp prices. In response to these comments, a new Regulatory Impact Review and Final Regulatory Flexibility Analysis were conducted which incorporated information gathered during the public comment period as well as the best available information from existing databases on profit margins, gear costs, and the durability and cost of replacement of equipment. The average replacement cost for a leatherback TED was assumed to be \$220, 4 TEDS were assumed necessary for small vessels and 8-10 TEDs for large vessels, and the average useful life of a TED was assumed to be 3 years. The assumption of a 20-percent profit margin was eliminated and, instead, vessel profits were internally calculated based on expected revenues and variable costs. Shrimp loss under current regulations as well as the proposed regulations was considered and discussed in the analysis. Estimates of shrimp loss under different TED requirements were derived from test data and provided by the NMFS SEFSC. The analysis allowed the use of an accelerator funnel, consistent with the rule. To incorporate the effects of the depressed shrimp prices, 2001 prices were utilized throughout the assessment.

Description of Significant Alternatives to the Proposed Rule and Discussion of how the Alternatives Attempt to Minimize Economic Impacts on Small Entities

Other than the status quo alternative, there were 4 alternatives analyzed including the measures in this final rule (preferred action). One of the proposed alternatives, Alternative 1, would increase the standard size opening of TEDs to 35 inches (89 cm) by 20 inches (51 cm) in all areas; change the minimum grid size to at least 32 inches (81 cm) by 32 inches (81 cm) in all areas; redescribe the current version of the leatherback modification; replace the Leatherback Contingency Plan with standardized zones and times where shrimp trawlers are required to have TEDs installed that exclude leatherback turtles; disallow the use of weedless TEDs and the Jones TED; change the requirements for hooped hard TEDs; change the requirements for accelerator funnels; require bait shrimpers to use TEDs in states where a state-issued bait shrimp license holder can also fish for food shrimp from the same vessel; and require tow time restrictions on trynets. This alternative would reduce the areal and seasonal extent of the leatherback TED requirements from that of the preferred action, but fewer endangered sea turtles would be saved and it is unclear whether costs would be materially reduced. Costs associated with this alternative could be equal to or exceed those of the preferred action.

Alternative 2 would increase the standard size opening of TEDs to 35 inches (89 cm) by 16 inches (41 cm) in all areas; change the minimum grid size to at least 30 inches (81 cm) by 30

inches (81 cm) in all areas; redescribe the current version of the leatherback modification; replace the Leatherback Contingency Plan with standardized zones and times where shrimp trawlers are required to have TEDs installed that exclude leatherback turtles; disallow the use of weedless TEDs and the Jones TED; change the requirements for hooped hard TEDs; change the requirements for accelerator funnels; require bait shrimpers to use TEDs in states where a state-issued bait shrimp license holder can also fish for food shrimp from the same vessel; and require tow time restrictions on trynets. This alternative would save even fewer sea turtles compared to the preferred action with, again, uncertainty associated with whether any cost savings could be achieved relative to the preferred action.

Alternative 3 would require the use of a TED capable of releasing a leatherback in all waters at all times; change the minimum grid size to a minimum grid size of at least 32 inches (81 cm) by 32 inches (81 cm) in all areas; redescribe the current version of the leatherback modification (71 inch TED); disallow the use of weedless TEDs and the Jones TED; disallow the use of hooped hard TEDs; disallow the use of accelerator funnels; require bait shrimpers to use TEDs in states where a state-issued bait shrimp license holder can also fish for food shrimp from the same vessel; and require tow time restrictions on trynets. This alternative has more stringent requirements and would, while

saving the same number of endangered sea turtles as the preferred action, likely do so at a higher cost. The status quo alternative would not achieve the desired biological goals of the action.

Copies of the EA/RIR/FRFA are available (see ADDRESSES).

List of Subjects

50 CFR Part 222

Endangered and threatened species, Exports, Imports, Marine mammals, Transportation.

50 CFR Part 223

Administrative practice and procedure, Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements.

50 CFR Part 224

Administrative practice and procedure, Endangered and threatened species, Exports, Imports, Transportation

Dated:

John Oliver
Deputy Assistant Administrator for Operations
National Marine Fisheries Service

For the reasons set out in the preamble, 50 CFR parts 222, 223, and 224 are amended as follows:

PART 222--GENERAL ENDANGERED AND THREATENED MARINE SPECIES

1. The authority citation for part 222 continues to read as follows:

Authority: 16 U.S.C. 1531-1544; and 16 U.S.C. 742a et seq., unless otherwise noted.

§ 222.102 [Amended]

2. In § 222.102, the definition: "Leatherback conservation zone" is removed.

PART 223--THREATENED MARINE SPECIES AND ANADROMOUS SPECIES

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

Authority: 16 U.S.C. 1531 et seq.

4. In § 223.206:

a. Paragraph (d) (2) (ii) (B) (1) is removed and paragraphs (d) (2) (ii) (B) (2) and (3) are re-designated as paragraphs (d) (2) (ii) (B) (1) and (2), respectively.

b. Paragraph (d) (2) (iv) is removed and paragraph (d) (2) (v) is re-designated as paragraph (d) (2) (iv).

c. Paragraph (d) (5) is removed and reserved.

d. Paragraphs (d) (2) (ii) (A) (2) and (4) are revised, and new paragraph (d) (2) (ii) (A) (5) is added to read as follows:

§ 223.206 Exceptions to prohibitions relating to sea turtles.

* * * * *

(d) * * *

(2) * * *

(ii) * * *

(A) * * *

(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;

* * * * *

(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.

* * * * *

5. In § 223.207, paragraph (a) introductory text, paragraphs (a) (3) (ii), (a) (4) through (a) (8), (b) (1), (b) (2), (d) (2), (d) (3), the headings of paragraphs (c) (1) (iv) (A) and (B) are revised and a new first sentence is added to paragraph (c) (1) (iv) (A) and a new last sentence is added to paragraph (c) (1) (iv) (B) to read as follows:

§ 223.207 Approved TEDs.

* * * * *

(a) Hard TEDs. Hard TEDs are TEDs with rigid deflector grids and are categorized as "hooped hard TEDs" - which may only be used in inshore waters, except for the inshore waters of Georgia and South Carolina - 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:

* * * * *

(3) * * *

(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 TED. On a hooped hard TED, the escape opening must have a horizontal measurement no less than 35 inches (89 cm) wide and a forward measurement no less than 27 inches (69 cm). A door frame may not be used over the escape opening; however, 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.

(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 (a) (7) (ii) (C) 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 (a) (7) (ii) (B) 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.

(8) Size of hoop or grid--(i) Hooped hard TED. The front hoop on a 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 top of the front hoop must be at least 20 inches (51 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.

* * * * *

(b) * * *

(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.

* * * * *

(c) * * *

(1) * * *

(iv) * * *

(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.** *

* * * * *

(B) Offshore opening. * * * 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.

* * * * *

(d) * * *

(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 1 5/8 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 1-5/8 inches (4 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 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 (13 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.

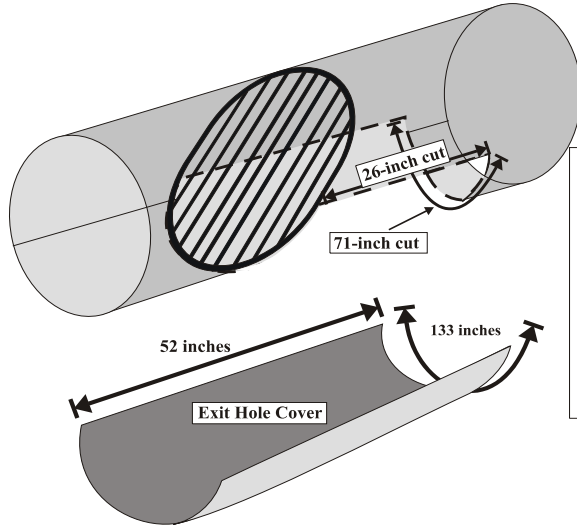
(ii) 71-inch offshore TED Flap. The flap must be a 133-inch (338-cm) by 52-inch (132-cm) piece of webbing. The 133-inch (338-cm) edge of the flap is attached to the forward edge of the opening (71-inch (180-cm) edge). The flap may extend no more than 24 inches (61 cm) behind the posterior edge of the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

(iii) Double cover flap 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 cm) wide and may overlap each other no more than 15 inches (38 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 6 inches (15 cm) past the posterior edge of the grid (Figure 16 to this part). Chafing webbing described in paragraph (d)(4) of this section may not be used with this type of flap.

Figures 12 and 15 to Part 223 [Amended]

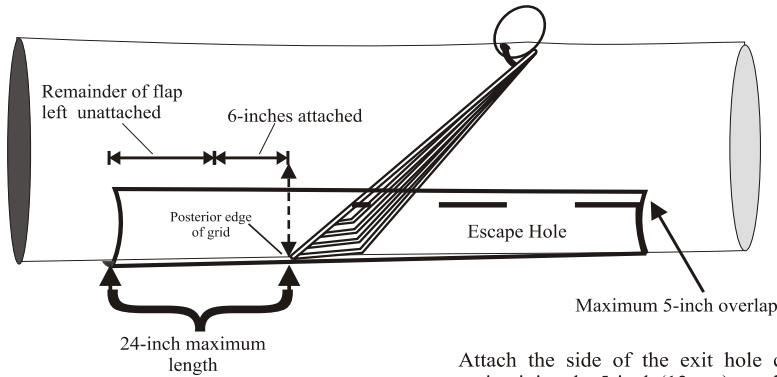
6. In part 223, Figures 1, 2 and 11 are removed and reserved; Figures 12a and 12b are removed; new Figure 12 is added; and Figure 15 is revised to read as follows:

Escape Opening & Cover Dimensions for 71-inch TED



The exit hole cover is made by cutting a 133-inch (338-cm) by 52-inch (132-cm) piece of webbing no smaller than 1½-inch (4-cm) stretched mesh and no larger than 1-5/8 inch (4.2-cm) stretched mesh.

The 133-inch (338-cm) edge of the cover is attached to the forward edge of the opening (71-inch (180-cm) edge). The cover should overlap the exit hole on each side by no more than 5-inches (13-cm).



The cover may extend no more than 24-inches (61-cm) behind the posterior edge of the TED frame.

Attach the side of the exit hole cover, maintaining the 5-inch (13-cm) overlap, to the side of the escape opening by sewing 28-inches (71-cm) of the cover to 26-inches (66-cm) of the opening forward of the TED frame. Behind the TED frame, sew an additional 15-inches (38-cm) of the cover to 15-inches (38-cm) of the extension.

Figure 12 to Part 223

Weedless TED Brace Bar Description

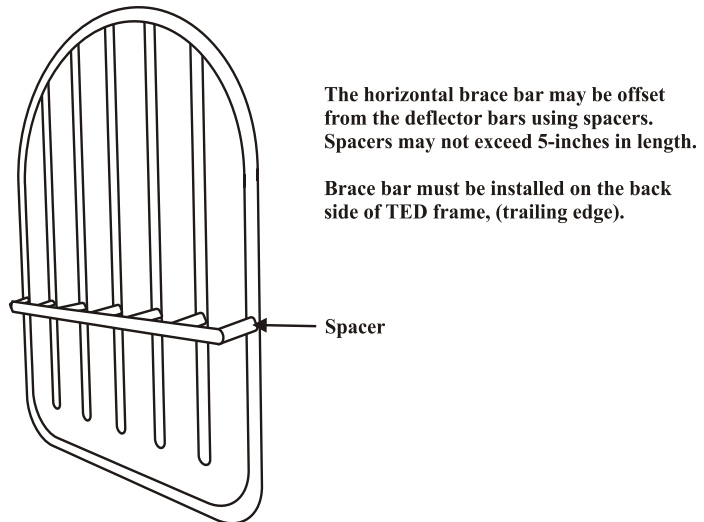
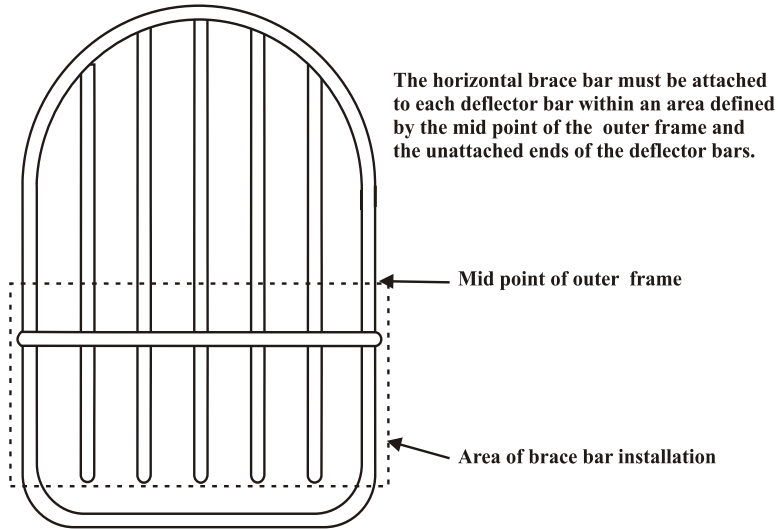


Figure 15 to Part 223

PART 224--ENDANGERED MARINE AND ANADROMOUS SPECIES

7. The authority citation for part 224 continues to read as follows:

Authority: 16 U.S.C. 1531-1543 and 16 U.S.C. 1361 et seq.

§ 224.104 [Amended]

8. In § 224.104, paragraph (c) is removed, and paragraph (d) is redesignated as paragraph (c).