

Issued in Washington, DC, on September 26, 2001.

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[FR Doc. 01-24539 Filed 10-1-01; 8:45 am]

BILLING CODE 4910-60-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 222 and 223

[Docket No.000320077-1177-02;
I.D.062501B]

Endangered and Threatened Wildlife; Sea Turtle Conservation Requirements

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

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS proposes to amend the regulations protecting sea turtles to enhance their effectiveness in reducing sea turtle mortality resulting from shrimp trawling in the Atlantic and Gulf Areas of the southeastern United States. Turtle excluder devices (TEDs) have proven to be effective at excluding sea turtles from shrimp trawls; however, NMFS has determined that modifications to the design of TEDs need to be made to exclude leatherbacks and large, 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 proposed amendments are necessary to protect endangered and threatened sea turtles in the Atlantic and Gulf Areas.

DATES: Written comments will be accepted through November 16, 2001.

ADDRESSES: Written comments on this action, the draft Environmental Assessment/Regulatory Impact Review Regulatory Flexibility Act Analysis (EA/RIR) and request for copies of the 1999 TED opening evaluation report should be addressed to the Chief, Endangered Species Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Silver Spring, MD 20910. Comments may also be sent via fax to 301-713-0376. Comments will not be accepted if submitted via e-mail or the Internet.

FOR FURTHER INFORMATION CONTACT:

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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*) 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 seaboard. In 1990 the National Academy of Sciences, in a report titled Decline of the Sea Turtle: Causes and Prevention, estimated that between 33,000 and 44,000 loggerhead and Kemp's ridley sea turtles were being killed, per year, as a result of shrimp trawling activities. On June 27, 1987, (52 FR 24244) NMFS required TEDs in certain areas during certain times and further defined and expanded the required use of TEDs in the shrimp fishery on December 4, 1992, (57 FR 57348). These rules and subsequent modifications are codified in 50 CFR 223.206 and 50 CFR 223.207 and require most shrimp and summer flounder trawlers operating in the Southeastern U.S. (Atlantic Area, Gulf Area, and summer flounder sea turtle protection area) 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 use of TEDs has contributed to the strong population increase for Kemp's ridley sea turtles. Kemp's ridleys are the smallest sea turtles, and adult size animals can pass through the current TED opening dimensions. Once the most critically endangered sea turtle, their 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 (including natural mortality that cannot be controlled) for coastal Kemp's ridleys has been reduced by 44-50 percent (TEWG, 2000). NMFS believes that this demonstrates that the use of TEDs can have a significant impact on the survival and recovery of sea turtle species.

Despite the demonstrated success of TEDs for some species of sea turtles, NMFS is concerned that TEDs are not adequately protecting all species and size classes of turtles. There is new information showing 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 leatherback turtles by trawlers through a regime of reactive closures that has proven complicated and incomprehensive. There is also concern about the status of these populations with stable or declining nesting numbers for the northern nesting population of loggerhead sea turtles (TEWG, 2000) and dramatically declining nesting of leatherback sea turtles on their main nesting grounds (NMFS SEFSC, 2001). NMFS is therefore proposing to modify the TED regulations to insure TEDs are capable of releasing large leatherback sea turtles and adult loggerhead and green turtles. These modifications will extend the protection TEDs afford smaller turtle species to all size classes of all sea turtle species.

Summary of Proposed Changes to the Sea Turtle Regulations

NMFS is proposing to amend the regulations applicable to shrimp trawling in all inshore and offshore waters of the Atlantic and Gulf Areas to:

- Require all hard TEDs to have a grid with a minimum inside measurement of 32-inch (81-cm) by 32-inch (81-cm);
- require the use of either the double cover flap TED or a TED opening with a minimum of 71 inch (180 cm) straight-line stretched mesh;
- disallow the use of the hooped hard TED;
- disallow the use of weedless TEDs and Jones 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 the use of tow times on small try nets. These changes are

proposed to be implemented 1 year after the final rule is published in the **Federal Register**.

Advanced Notice of Proposed Rule Making

The measures proposed in this rule were based, in part, on comments received on an Advanced Notice of Proposed Rule Making (ANPR) published April 5, 2000 (65 FR 17852). NMFS announced in the ANPR that it was considering technical changes to the TED regulations, to effectively protect all life stages and species of sea turtles. Specific changes discussed were to increase the minimum size opening for TEDs, modify or decertify hooped hard TEDs and weedless TEDs, change the requirements for the types of flotation required, and modify the leatherback conservation zone regulations.

NMFS received 23 responses to the request for comments on the ANPR. When 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: Environmental organizations, Federal agencies, state agencies, state Sea Turtle Stranding and Salvage Network (STSSN) volunteers, and unaffiliated citizens believe that the openings of the current TEDs are too small and should be enlarged to allow larger turtles to escape. Some of these commenters believe that the size specified in the ANPR of 35 inches by 16 inches (89 cm by 41 cm) would not be adequate to protect large nesting turtles.

Response: NMFS agrees with the need to make TED escape openings larger and is therefore proposing to increase the escape opening size of TEDs in all inshore and offshore waters of the Atlantic and Gulf areas. The size proposed in the ANPR of 35 inches by 16 inches (89 cm by 41 cm) was based on information from Epperly and Teas (1999) which used a linear regression formula to estimate body depth based on carapace width, and suggested that 99 percent of nesting loggerheads of the northern subpopulation had carapace widths equal to or less than 33 inches (83.2 cm) and a corresponding depth of 15.7 inches (39.8 cm). However, carapace measurements recently collected by the South Carolina Department of Natural Resources (SCDNR) on actual nesting females of the northern loggerhead population showed 7 out of 90 had body depths greater than 16 inches (40.6 cm). Also significant numbers of the endangered

leatherback turtle have been documented in inshore and offshore waters in the Atlantic and Gulf areas. Therefore, to protect all turtles, NMFS is proposing to require the use of the double cover flap TED or a TED opening with a minimum of 71-inch (180-cm) straight-line stretched mesh (see Provisions of the Proposed Rule).

Comment 2: Environmental organizations, Federal agencies and state agencies recommend the modification of the leatherback conservation zone regulations (60 FR 25260, May 12, 1995; 60 FR 25663, May 12, 1995) implemented as a result of the Leatherback Contingency Plan. These commenters believe that the response times in implementing emergency rules for closure of waters during leatherback migrations are too slow and that the surveying required to support these rules is frequently underfunded or too variable due to weather and water clarity. Also, some of these commenters believe the Gulf coast should be included in the Leatherback Contingency Plan.

Response: NMFS is proposing the use of either the double cover flap TED or a TED opening with a minimum of 71-inch (180-cm) straight-line stretched mesh in all inshore and offshore waters in the Atlantic and Gulf Areas. Both of these TEDs have openings large enough to accommodate leatherbacks as well as large nesting loggerheads. This would eliminate the need for emergency rules and surveying.

Comment 3: Commercial Fishermen of Lafitte do not want NMFS to prohibit the use of the hooped hard TED. They state that the hooped TED, known as the Coulon TED, not only excludes turtles but also works well as a finfish bycatch reduction device. The Coulon TED is a hooped hard TED with an escape opening of 34 inches (86 cm) by 27 inches (69 cm) with the front hoop measuring 34 inches (86 cm) by 17 inches (43 cm). The Commercial Fishermen of Lafitte state that the escape opening of this TED can be expanded to 35 inches (89 cm) by 27 inches (69 cm), with the front hoop measuring 35 inches (89 cm) by 17 inches (43 cm). According to a net maker in the area, approximately 50 fishing vessels are using this TED in Louisiana waters.

Response: In order to protect the endangered leatherback and large loggerhead sea turtles, NMFS must ensure that all approved TEDs are capable of releasing these large turtles. The expanded version of the Coulon TED is not large enough to release large loggerhead and leatherback sea turtles. It would be impractical to use a hooped

hard TED that would be large enough to release leatherback turtles.

Comment 4: The Florida Fish and Wildlife Conservation Commission agrees with the need to make TED escape openings larger but feels NMFS should consider the economic burden of Florida's inshore shrimp fishery when considering the use of the leatherback modification and the increase of the standard grid size.

Response: NMFS' gear specialists working on the east coast of Florida reported that the majority of inshore fishermen use grids 32 inches (81 cm) and larger. NMFS is proposing to increase the grid size to a minimum inside measurement of 32 inches (81 cm) by 32 inches (81 cm). Based on the information from the gear specialists this will not affect a large number of Florida inshore fishermen. The Florida inshore fishermen who use grids smaller than 32 inches (81 cm) will have 1 year to change to the new size grid. By delaying the implementation date to 1-year after the final rule is published in the Federal Register, fishermen would be able to buy the new size grid as part of necessary gear replacement and thereby not add an additional cost.

Comment 5: The United States Fish and Wildlife Service (USFWS) recommends the decertification of the hooped hard TED and the weedless TED and the abolishment of the TED exemption for bait shrimpers.

Response: NMFS agrees with the USFWS on the need to disallow the use of the hooped hard TED and the weedless TED for the reasons described in the ANPR (65 FR 17852). The hooped hard TED is not widely used. NMFS' enforcement personnel report confusion with the differing regulatory requirements for escape openings for single grid and hooped hard TEDs. Weedless TEDs (a TED with the deflector bars not attached to the bottom of the grid frame) have been documented by NMFS enforcement with bent bars and spacing more than 4 inches (10 cm) apart. The bars of weedless TEDs appear to be easily bent during commercial use because of the inherent weakness in the design. NMFS' TED testing in 1996 showed that weedless TEDs with the bars bent inward (to the rear of the TED hoop) failed to exclude any of the turtles exposed. NMFS is proposing to implement a requirement that the bars on hard TEDs be firmly attached to the frame at both ends, 1 year after the publication of the final rule in the **Federal Register**.

NMFS also agrees with the USFWS that the bait shrimp exemption currently authorized under the sea turtle

conservation regulation represents a threat to sea turtles. 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. In some cases, these shrimpers are using "snap-in grids" on their TEDs and claim to have used them while catching the dead shrimp but then taking the "snap-in grid" out and closing the escape opening to fish for bait shrimp. Snap-in grids do not meet the regulatory requirement for the installation of the grid into the trawl net because the grids are attached to the outside of the grid frame with a few strings, plastic tie wraps or bolts and not sewn into the trawl around the entire circumference of the TED with heavy twine (50 CFR 223.207(a)(2)).

NMFS originally authorized a bait shrimp exemption, which requires tow times to be less than 55 minutes, believing tow times would be self-regulating as a bait shrimper would want to limit tow times to ensure live catch. However, gear specialists have found increasing numbers of bait shrimpers selling shrimp for food. Landing dead shrimp would likely result in an increase in tow times beyond the shorter tows used to catch live bait. Tow time limits are extremely difficult to enforce and have only been authorized in limited cases where particular fishing practices limit the length of tows. NMFS believes that the bait shrimp exemption is unenforceable and represents an increased risk in lethal take of turtles. Therefore, NMFS is proposing to change the bait shrimp TED exemption. Since 1992, when the bait shrimp exemption was initially developed, TEDs have been used successfully in small, inshore shrimp nets. Many bait shrimpers already own and use TEDs when not operating under their bait shrimp licences. In some areas, bait shrimpers use other exempt gear or practices (e.g., barred roller trawls, hand-retrieved nets). Changes to the bait shrimp exemption would affect none of these other exemptions.

Comment 6: Georgia Department of Natural Resources (GADNR) recommends the adoption of a single TED configuration for all areas at all times. The leatherback configuration should be the configuration adopted. According to GADNR, 30 percent of Georgia fishermen already use the leatherback modification full time because it is good at excluding trash fish and the long flap helps shrimp retention.

Response: NMFS agrees with the GADNR on the value of the leatherback modification. The use of the leatherback

modification (a TED opening with a minimum of 71-inch (180-cm) straight-line stretched mesh) or the double cover flap TED in all inshore and offshore waters will provide protection for all sea turtles. The current TED opening sizes do not afford protection for large sexually mature loggerhead and green turtles. Adoption of this proposed rule also will eliminate the need for the use of inefficient emergency rules and the leatherback conservation plan, which does not cover all areas where leatherback turtles can be found.

Comment 7: The University of Georgia Marine Extension Service (UGMES) requested the water depths be specified at which sponges-type floats would not be allowed.

Response: Upon further review of the TED float requirements, NMFS has decided not to propose amendments to them at this time due to the lack of testing of viable alternatives to sponges-type floats.

Comment 8: The UGMES also requested that NMFS allow other methods of hole enlargement, such as the addition of a strip of webbing in the center of the forward section of the extension webbing, to help maintain the angle of the TED.

Response: The use of a strip of webbing in the center of the forward section of the extension webbing to modify a TED with a leatherback size opening is not prohibited under current regulations. Also the double cover flap TED which can be used in-lieu of the leatherback modification has a smaller cut than the leatherback modification (the length of the leading edge of the escape opening cut must be no less than 56 inches (142 cm)). The double cover flap TED is composed of two equal size rectangular panels with an overlap of no more than 15 inches (38 cm) and each panel is no less than 58 inches (147 cm) wide. The panels can be sewn together only along the leading edge of the cut. The edge of the panels may be attached 6 inches (15 cm) behind posterior edge of grid; the end of each panel must not extend more than 6 inches (15 cm) past the center of the bottom of the grid. These modifications make it easier to install TEDs on a smaller grid.

Comment 9: The Texas Shrimp Association (TSA) requested that shrimp loss data be evaluated and that NMFS determine what impact a 300-lb to 1,200-lb (136-kg to 545-kg) leatherback turtle would have on any TED. TSA also asked whether the Epperly and Teas (1999) study was submitted for peer review. TSA questioned the need for a larger size opening in the western Gulf based on the fact that stranded turtles on the

western Gulf, on average, are smaller than those on the Atlantic and eastern Gulf coasts.

Response: In the summer of 2000, NMFS conducted seven trips to test the leatherback modification for shrimp loss in commercial conditions. The leatherback modification was compared with TEDs currently used in the Gulf of Mexico and the southeastern Atlantic. Four of the trips were conducted in the Gulf of Mexico, and three were conducted in the Atlantic. Shrimp loss for the four Gulf of Mexico trips showed a 3-percent loss (trip #067), a 35-percent loss (trip #068), a 1-percent loss (trip #069), and a 2-percent loss (trip #073), while the three Atlantic trips combined showed a 3-percent shrimp loss (trips #070-072). NMFS believes that shrimp loss percentage from trip #068 is an error and not indicative of actual shrimp loss. The 35-percent shrimp loss demonstrated on this trip is well above the range of 1 to 3 percent demonstrated by the other six trips. NMFS believes that gear problems on trip #068 could have contributed to the 35-percent loss. The 1- to 3-percent loss on the other trips was not statistically significant from zero.

NMFS cannot use live leatherback turtles for testing; however, NMFS believes a 300-lb to 1,200-lb (136-kg to 545-kg) leatherback will do much less damage to a TED and shrimp gear if it is allowed to escape.

The Epperly and Teas (1999) study has not yet been peer reviewed; however, it is being submitted for publication in the scientific journal *Fishery Bulletin* and, as part of that process, will receive peer review.

NMFS disagrees with the TSA's assessment that a larger size opening is not needed in the western Gulf of Mexico. Stranding records from 1986 through 1997 show that 36 to 66 percent of loggerhead turtles stranded in the western Gulf were larger than the current minimum TED escape opening size, and records from 1986 through 1999 show that 170 leatherback turtles were stranded in the western Gulf of Mexico.

Provisions of the Proposed Rule

Increase of the Minimum Size of the TED Opening in All Inshore and Offshore Waters of the Atlantic and Gulf Areas

TEDs incorporate an 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 able to exclude small sea turtles during experimental TED testing conducted by NMFS. TEDs also 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.

NMFS proposes to require the use of the NMFS-approved double cover flap TED (approved May 14, 2001, 66 FR 24287) or a standard TED opening with a minimum of 71 inch (180 cm) straight-line stretched mesh measurement, with a resultant circumference of the opening being 142 inches (361 cm) (formerly called the leatherback modification; approved May 12, 1995, 60 FR 25663) in both the Atlantic and Gulf Areas. Both of these TEDs have been tested for shrimp retention (see the response to comment 9 of this notice for shrimp retention data on the new standard TED and 66 FR 24287 for the double cover flap TED) and small turtle escapement (see 60 FR 25663 and 66 FR 24287).

The double cover flap TED and the proposed standard TED were shown to be effective at excluding a prototype leatherback. Because testing with live leatherbacks is impossible, NMFS obtained the carapace measurements of 15 nesting female leatherback turtles and used these data to construct a pipe-framed model of a leatherback turtle measuring 40 inches wide by 21 inches deep (102 cm by 53 cm). The leatherback model and a diver with full scuba gear were able to pass through the escape openings of these TEDs.

Stranding data collected through the STSSN indicate that the proportion of large, mature loggerheads and greens that strand on coastal beaches appears to be greater than the proportion that would be expected given the size distribution of sea turtles found in nearshore waters. The disparity in size may be a result of the minimum size requirement for TED openings which allows only smaller turtles to escape. NMFS (Epperly and Teas, 1999; copies available see **ADDRESSES**) evaluated the size of TED openings in relation to the carapace width and body depth of stranded sea turtles and found that body depth, but not carapace width, was a factor in the turtle's ability to exit the TED opening. Up to 47 percent of the body depths for stranded loggerheads and 7 percent for green turtles exceeded the minimum height requirements for TED openings.

Stranding data from 1986 through 1997 show that between 33 percent and

47 percent of all loggerhead turtles stranded had body depths greater than the minimum height of the TED opening. These percentages range from 33-66 in the western Gulf of Mexico, to 83-96 in the eastern Gulf of Mexico, to 23-40 in the Atlantic off the coast of the southeastern United States (Epperly and Teas, 1999). These same data also show that between 1 and 7 percent of all green turtles stranded had body depths greater than the minimum height of the TED opening. These percentages range from 0-3 in the western Gulf of Mexico, to 1-10 in the eastern Gulf of Mexico, to 3-10 in the Atlantic off the coast of the southeastern United States (Epperly and Teas, 1999). Measurements done on South Carolina nesting beaches conducted by the SCDNR in the summer of 2000 on nesting loggerhead turtles showed 89 of the 90 nesting turtles had body depths greater than the minimum TED opening in the Atlantic Area.

This information indicates that current TED openings may be allowing continued high incidental take of large reproductive loggerhead and green turtles. Since this take is focused on pre-reproductive and reproductive turtles, it may be precluding most, if not all, benefits these species may be receiving from the exclusion of small juveniles from shrimp trawls.

The proposed use of a TED opening with a minimum of 71 inch (180.3 cm) straight-line stretched mesh or the double cover flap TED would be large enough to exclude 100 percent of nesting loggerhead and green turtles based on the information in Epperly and Teas (1999) and the measurements of nesting loggerhead turtles taken by the SCDNR in the spring and summer of 2000. 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 multiplication rate (Crouse *et al.*, 1987; Hopewell, 1998).

The Turtle Expert Working Group (TEWG 1998) identified four genetically separate nesting populations of loggerhead turtles in the southeastern United States. The health and recovery of the loggerhead turtle species is dependent on the health and recovery of each of these populations. It is believed that the northern nesting population may at best be stable and possibly may be in decline.

Leatherback sea turtles are too large to fit through the standard size TED opening; when mature, they can weigh between 600 and 1,300 lb (273 and 591 kg). To address this issue, NMFS, in cooperation with the USFWS, South Carolina, Georgia, and Florida,

developed the Leatherback Contingency Plan to reduce leatherback mortality in shrimp trawls, and, in 1995, NMFS established the leatherback conservation zone regulations to implement the Leatherback Contingency Plan (60 FR 25260, May 12, 1995; 60 FR 25663, May 12, 1995). The Leatherback Contingency Plan established procedures to identify when and where TEDs with large escape openings should be used to protect leatherbacks during their annual, spring migration along the Atlantic seaboard. The waters north of Cape Canaveral, from Florida to the North Carolina-Virginia border, were identified as the leatherback conservation zone. Within this zone, weekly aerial surveys for leatherback sightings are conducted from January 1 through June 30 of each year. If sightings, in replicate surveys, exceed 10 leatherback turtles per 50 nautical miles (nm) (92.6 km) of trackline, NMFS will close, for a 2-week period, waters within 1° lat. of the trackline to shrimp trawlers unless they use a TED modified with the leatherback exit opening.

In 1999, NMFS became concerned that the leatherback conservation zone regulation was not adequate to protect leatherbacks. In the spring of 1999, NMFS implemented the 2-week closures in areas of South Carolina and North Carolina (64 FR 25460, May 12, 1999; 64 FR 27206, May 19, 1999; 64 FR 28761, May 27, 1999; 64 FR 29805, June 3, 1999). In implementing the regulation, it was determined that replicate surveys were not always feasible due to weather, staff, or equipment constraints and that a sighting of less than 10 leatherbacks per 50 nm (92.6 km) in the replicate survey was not necessarily an indication that the turtles had moved away from the closed area.

From October 1 through December 15, 1999, 15 leatherbacks stranded in Nassau through Brevard counties on the east coast of Florida. Since these strandings occurred seasonally outside the provisions specified in the leatherback conservation zone regulation, NMFS issued an emergency 30-day rule (64 FR 69416, December 13, 1999), requiring shrimp trawlers to use the leatherback modification in their TEDs. The 30-day restriction was necessary because leatherbacks were expected to be present in the area through that period.

The leatherback conservation zone regulation does not extend to the Gulf area. Historical records indicate that the Western Gulf is important to leatherbacks; Leary (1957) reported a large group of up to 100 leatherbacks just offshore of Port Aransas, Texas associated with a dense aggregation of

Stomolophus. Recent stranding data from 1986 through 1999 show an average of 9 leatherbacks per year have been killed in the Western Gulf; however, in the last 5 years, that average has gone up to 14 leatherbacks stranded per year, with a high of 21 leatherbacks in 1999. Leatherbacks are also killed in the Eastern Gulf, with an average of 5 per year from 1986 through 1999 and with a high of 19 in 1989. In the Atlantic along the southeastern United States, leatherback strandings have averaged 46 per year from 1986 through 1999. Leatherbacks strand along the Atlantic coast of Florida year-round, averaging 21 strandings per year.

In French Guiana and Suriname, the largest leatherback rookery in the western North Atlantic, nesting has decreased at a rate of 15.0 percent - 17.3 percent per year since 1987 (NMFS SEFSC 2001). If turtles are not nesting elsewhere, it appears that the Western Atlantic portion of the population is being subjected to mortality beyond sustainable levels, resulting in a continued decline in numbers of nesting females. There have been increases in leatherback nesting at minor nesting areas such as Florida and the U.S. Virgin Islands, but those cannot account for the decreases in the Guianas, which are in the tens of thousands.

A steady increase in Kemp's ridley nesting, which has not leveled off to date, has occurred since 1990 and appears to be due to increased hatchling protection and a large increase in survival rates of immature turtles beginning in 1990, coinciding with the introduction of TEDs. Adult ridley numbers have now grown from a low of approximately 1,050 adults producing 702 nests in 1985, to greater than 3,000 adults producing 1,940 nests in 1995, to greater than 9,000 adults producing about 5,700 nests in 2000 (TEWG 2000). The increase in the Kemp's ridley nesting population since 1989 demonstrates that the use of TEDs can have a significant positive impact on the survival and recovery of sea turtle species. The proposed required use of either the new standard TED opening or the double cover flap TED in all inshore and offshore waters in the Gulf and Atlantic Areas will provide the protection TEDs afford smaller turtle species to all size classes of all sea turtle species thereby aiding in their recovery. This proposal will also provide consistency and predictability for the industry by eliminating the disparate regulations in different areas and times and eliminating reactionary closures to protect leatherback turtles.

Disallow the Use of Hooped Hard TEDs, Weedless TEDs, Jones TEDs, and Accelerator Funnels; Require Bait Shrimpers in Certain States to use TEDs; and Require Tow Time Restrictions on Small Try Nets

As stated in NMFS's response to Comment 5 in this proposed rule, 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 these TEDs' ability to exclude turtles. Therefore, NMFS is proposing to require that TED deflector bars be securely attached/welded to the top and bottom of the TED frame or to a horizontal deflector bar (in the case of flounder TEDs), to be implemented 1 year after the final rule is published in the **Federal Register**. This will allow fishermen to replace this gear as part of normal gear replacement due to wear and tear.

As stated in NMFS's response to Comments 3 and 5 in this proposed rule, it is not feasible to construct a hooped hard TED large enough to exclude large loggerhead and leatherback turtles. The hooped hard TED also is not widely used, and enforcement personnel report confusion with the differing regulatory requirements for escape openings for single grid and hooped hard TEDs.

NMFS is proposing that the use of accelerator funnels not be allowed. The opening in an accelerator funnel that would be required to effectively release large loggerhead and leatherback turtles would be too large (71 inch (180 cm)) to accelerate the water through the grid and would cause the unattached portion of the funnel to extend out the escape opening causing the loss of shrimp.

NMFS is also proposing to change the exemption from TED requirements for bait shrimpers. As stated in NMFS's response to Comment 5, 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. Landing dead shrimp would likely result in 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. Therefore, NMFS is proposing to limit 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.

NMFS is proposing to require shrimpers to limit tow times when deploying small try nets. Sea turtles are captured in trynets. 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 feet (3.6 m) or foot rope length greater than 15 feet (4.6 m) to have a TED installed but exempted the smaller try nets (61 FR 66933, December 19, 1996). NMFS initially issued this exemption without tow time restrictions because it felt that this type of gear naturally lent itself to short tow times.

NMFS recognizes that tow time limits are difficult to enforce, but without tow time restrictions, NMFS has no enforcement mechanism to ensure compliance with measures that will increase protection of listed sea turtles.

Request for Comments

NMFS will accept written comments (see **ADDRESSES**) on this proposed rule until November 16, 2001. In addition, NMFS will conduct public hearings on this action. Hearing dates, times, and locations will be published in the **Federal Register** under separate notification.

References

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- National Academy of Science, National Research Council. 1990. Decline of the Sea Turtles: Causes and Prevention. National Academy Press. Washington, D.C. 189 pp.
- National Marine Fisheries Service Southeast Fisheries Science Center (NMFS SEFSC). 2001. Stock assessments of loggerhead and leatherback sea turtles and an assessment of the impact of the pelagic longline fishery on the loggerhead and leatherback sea turtles of the Western North Atlantic. U.S. Department of Commerce NOAA Technical Memorandum NMFS-SEFSC-455, 343 pp.
- Turtle Expert Working Group (TEWG). 2000. Assessment update for

the Kemp's ridley and loggerhead sea turtle populations in the Western North Atlantic. U.S. Department of Commerce NOAA Technical Memorandum NMFS-SEFSC-444, 115pp.

Turtle Expert Working Group. 1998. (Byles, R., C. Caillouet, D. Crouse, L. Crowder, S. Epperly, W. Gabriel, B. Galloway, M. Harris, T. Henwood, S. Heppell, R. Marquez-M, S. Murphy, W. Teas, N. Thompson, and B. Witherington). An Assessment of the Kemp's ridley sea turtle (*Lepidochelys kempii*) and loggerhead (*Caretta caretta*) sea turtle populations in the western North Atlantic. NOAA Technical Memorandum NMFS-SEFSC-409. 96 pp.

Classification

This proposed rule has been determined to be not significant for purposes of Executive Order 12866.

The ESA provides the statutory basis for the rule.

NMFS prepared a draft EA/RIR for this proposed rule that discusses the impact on the environment as a result of this proposed rule. A copy of the draft EA/RIR is available from NMFS (see ADDRESSES).

The Chief Counsel for Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration that this proposed rule, if adopted, would not have a significant economic impact on a substantial number of small entities.

Fishermen may be adversely affected by this proposed rule primarily in the following ways: possible shrimp loss due to the increase in the size of the TED opening and additional costs to retrofit current TEDs in order to meet proposed minimum grid and opening sizes.

The increase in the TED opening to a minimum of 71 inch (180.3 cm) straight-line stretched mesh would apply to all shrimp fishermen in the known universe of shrimp trawlers (15,096). This TED opening requirement would be expected to result in a 1-3 percent loss which is not statistically different from zero. Assuming a 2 percent shrimp loss, the estimated annual real profits by size category, and the number of fishing craft per category, the estimated impacts in terms of lost real profits per year by size category would be as follows: \$582,600 for state registered boats, \$251,812 for vessels less than 45 feet (13.7 m), \$205,869 for vessels between 45 and 60 feet (13.7 and 18.3 m), and \$389,844 for vessels greater than 60 feet (18.3 m). Thus, the total annual loss of profits for the industry would be \$1,430,125. Applying the standard discount rate of 7 percent over a 5 year time period generates a loss of

\$5,863,795 in real profits. Shrimpers would have an option to use the double cover flap TED instead of the TED opening with a minimum of 71 inch (180.3 cm) straight-line stretch mesh. The double cover flap TED was tested to determine its ability to retain shrimp when compared to a commercial TED with a standard flap. The double cover flap TED gained 0.00257 pounds (1.1 gram) of shrimp per tow when compared to the TED with the standard flap. Assuming shrimpers chose this option, there would be no expectation of a 2 percent shrimp loss.

Many shrimpers who operated in the areas specified in the leatherback conservation zone regulation and were required to use the leatherback modification in the past due to emergency rules issued by NMFS, continued to use the modification after it was no longer required because they thought it performed better than the standard TED in retaining shrimp. GADNR reports that up to 60 percent of their shrimp fishermen still use the leatherback modification after NMFS required them to use it during the spring of 1999. Nonetheless, it is not known whether a similar percentage of shrimp fishermen are using the leatherback modification in their TEDs in other states/areas.

The leatherback modification excludes large debris from the trawl which improves performance. Fishermen can also use long flaps on bottom opening TEDs in areas where short flaps must be used on bottom opening TEDs with the standard size opening. Longer flaps will likely increase shrimp retention. NMFS believes that the use of the leatherback modification and its possibility of increased performance from the exclusion of debris and the use of long flaps may benefit fishermen. The extent of these potential benefits is unknown.

Survey data suggest that costs will be incurred by all shrimp fishermen who must acquire a larger frame to meet the proposed grid size of a minimum inside measurement of 32 in (81 cm) by 32 in (81 cm) and those who must refit their existing TEDs to the new 35 in (89 cm) by 20 in (51 cm) requirement. On average, the cost of a new frame is estimated to be \$85 and the cost of refitting to the new minimum size opening is \$45. However, the survey data also indicate that the smallest grid sold by 4 of the 7 net shops would meet the new requirements proposed in this alternative. Based on this information and observations by enforcement personnel and NMFS' gear specialists, NMFS believes that the majority of shrimpers use grids that already meet

the required minimum grid size proposed by this rule. Those that currently use grid sizes smaller than the proposed minimum will have a year to replace them, giving fishermen the opportunity to replace them as part of scheduled gear maintenance and replacement. Thus, there should be no additional costs beyond those incurred as a result of existing TED regulations.

Modifications needed to meet the proposed opening sizes should impose relatively few additional costs. Most fishermen and net shop owners can make the changes needed to enlarge the escape openings on their own. For those who cannot, NMFS' gear specialists will be available to help them modify their TEDs to meet the new requirements. Although no direct out of pocket expenses may be incurred, an opportunity cost of the time necessary to make these modifications should still be taken into account. Given the nature of the modifications, we estimate that an hour of the fisherman's time will be needed to complete this task. Assuming that the owner or captain is responsible for making such gear modifications, the average real hourly wage of first-line supervisors/mangers in the farming, fishing and forestry industries is the best measure of opportunity cost. This figure is currently estimated to be \$11.49 according to the BLS. Although some fishermen may not incur this cost as a result of already using TEDs with larger openings, some may have to incur the out of pocket expense of \$45 to have someone else do the modifications for them.

The disallowance of the hooped hard TED is expected to affect approximately 50 small entities in Louisiana that currently use these TEDs. Unlike the weedless TED, the hooped hard TED is a durable TED and one that cannot be converted to another type of TED. Thus, for these fishermen, even with a year to convert their TEDs, they would be forced to purchase complete and new TEDs. Based on the survey data, new TEDs in Louisiana cost approximately \$200. Assuming that these fishermen use quad rig trawls (i.e., 4 nets), this part of the rule would require a one time expenditure of \$800 per entity, or \$40,000 in the aggregate.

NMFS also proposes to disallow the use of weedless and Jones TEDs. Current information suggests that the Jones TED is not presently in use. The weedless TED is only known to be used in Texas. Information from boardings of shrimp fishing craft suggest that 15 percent of Texas shrimpers currently use the weedless TED. Since the weedless TED is known to be less durable than other TEDs, commonly needing to be replaced

every year, no additional costs are expected as a result of this requirement since this proposed alternative would not be implemented until 1 year after the final rule is published in the **Federal Register**. This period would give fishermen the opportunity to replace these types of gear as part of scheduled gear maintenance and replacement.

The changes to the bait shrimp exemption are not expected to generate any new impacts on shrimp fishermen. Clarification of TED requirements for bait shrimpers is needed because, in certain areas, many shrimp fishermen constantly switch back and forth between bait and food shrimping operations. Since these modifications do not impose TED requirements on any entity or operation that was not already covered by the existing TED requirements, no impacts would be expected.

Shrimpers deploying small try nets would be required to abide by existing tow time limitations, which are typically 55 minutes, in order to be exempt from existing TED requirements. If try nets are truly being used as a means to test fishing grounds for shrimp abundance, as opposed to an additional device to catch shrimp, then this requirement should not impose any costs since typical tow times for try nets are known to be 15-20 minutes.

In conclusion, the proposed changes to the sea turtle conservation regulation would not likely impose a significant economic impact on a substantial number of small entities. The increase in the minimum size openings and grid sizes for TEDs potentially impacts all shrimp trawlers in the Gulf of Mexico and South Atlantic which is estimated to be approximately 15,000 fishing craft.

The two criteria to be considered in determining the significance of economic impacts are the disproportionate effect and profitability between large and small businesses. Since all fishing trawling operations are considered small entities, the issue of a disproportionate effect is not applicable. And even if differences in fishing craft size are examined, in general, the impacts are proportionally the same across these size groups.

With the exception of the leatherback modification requirement and the TED modification costs, the components of this rule are not expected to reduce profits. The combination of shrimp loss as a result of using the TED opening with a minimum of 71 inch (180.3 cm) straight-line stretched mesh and TED modification expenses could have a significant economic impact. An average loss of 2 percent loss in profits could be expected only if several assumptions are

met: (1) None of the potentially affected entities have already converted to using the leatherback modification; (2) none chose to use the double cover flap which showed no loss in shrimp. Since all these assumptions are unlikely to be met, the true loss in profits is likely much less and thus not significant.

Dated: September 24, 2001.

William T. Hogarth,

Assistant Administrator of Fisheries, National Marine Fisheries Service.

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.

For the reasons set out in the preamble, 50 CFR parts 222 and 223 are proposed to be 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 definitions: “Atlantic Shrimp Fishery--Sea Turtle Conservation Area (Atlantic SFSTCA)”, “Gulf Shrimp Fishery--Sea Turtle Conservation Area (Gulf SFSTCA)”, and “Leatherback conservation zone” are 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 re-designated as paragraph (d)(2)(ii)(A)(5), 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)(5) is removed and reserved.

c. Paragraph (d)(2)(ii)(A)(2) is revised to read as follows:

§ 223.206 Exceptions to prohibitions relating to sea turtles.

* * * * *

(d) * * *

(2) * * *

(ii) * * *

(A) * * *

(2) Is a bait shrimper that retain all live shrimp on board with a circulating seawater system, if it does not possess more than 32 pounds (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 only;

* * * * *

5. In § 223.207:

a. Paragraph (a) introductory text and paragraphs (a)(3), (a)(4), (a)(6) are revised; paragraphs (a)(7)(i) and (a)(8)(i) are removed; paragraphs (a)(7)(ii) and (a)(8)(ii) are re-designated as paragraphs (a)(7)(i) and (a)(8)(i), respectively, and revised; and paragraphs (a)(7)(ii) and (a)(8)(ii) are reserved;

b. Paragraph (b)(2) is removed and reserved;

c. Paragraph (c)(1)(iv) is revised;

d. Paragraph (d)(2) is removed; paragraph (d)(3) is re-designated as paragraph (d)(2) and revised; and paragraphs (d)(4) and (d)(5) are re-designated as (d)(3) and (d)(4), respectively, to read as follows:

§ 223.207 Approved TEDs.

* * * * *

(a) *Hard TEDs.* Hard TEDs are TEDs with rigid deflector grids, considered 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) *Angle of deflector bars.* (i) The angle of the deflector bars must be between 30° and 55° from the normal, horizontal flow through the interior of the trawl.

(A) The deflector bars run from top to bottom and are attached to the bottom of the TED frame. The angle of the bottom most 4 inches (10 cm) of each deflector bar, measured along the bars, must not exceed 45° (Figures 14A and 14B to this part).

(B) [Reserved]

(ii) [Reserved]

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

(7) * * *

(i) *Single-grid hard TEDs*. On a single-grid hard TED, the cut for the escape opening cannot 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. The overall size of the escape opening must match one of the following specifications:

(A) *Standard 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 a minimum of 71 inches (180 cm). (Figure 1A of this part illustrates the dimensions of these cuts). A webbing flap, as described in (d)(3)(i) of this section, may be used with this escape hole. The resultant opening with a webbing flap must have a minimum width of 71 inches (180 cm) straight-line stretched mesh (Figure 1C of this part). The circumference of the exit opening must be 142 inches (361 cm) when stretched.

(B) *Double cover flap TED 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 of this part illustrates the dimensions of these cuts). A webbing flap, as described in (d)(3)(ii) of this section, may be used with this escape hole.

(ii) [Reserved]

(8) * * *

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

(ii) [Reserved]

* * * * *

(c) * * *

(1) * * *

(iv) *Escape Opening*. A horizontal cut extending from the attachment of one side of the deflector panel to the trawl to the attachment of the other side of the deflector panel to the trawl must be made in a single row of meshes across the top of the trawl and measure at least 96 inches (244 cm) in taut width. All trawl webbing above the deflector panel between the 96-inch (244-cm) cut and edges of the deflector panel must be removed. A rectangular flap of nylon webbing not larger than 2-inch (5.1-cm) stretched mesh may be sewn to the forward edge of the escape opening. The width of the flap must not be larger than the width of the forward edge of the escape opening. The flap must not extend more than 12 inches (30.4 cm) beyond the rear point of the escape opening. The sides of the flap may be attached to the top of the trawl but must not be attached farther aft than the row of meshes through the rear point of the escape opening. One row of steel chain not larger than 3/16 inch (4.76 mm) may be sewn evenly to the back edge of the flap. The stretched length of the chain must not exceed 96 inches (244 cm).

* * * * *

(d) * * *

(2) *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 (4.1 cm); it lies on the outside of the trawl; it is attached

along its entire forward edge forward of the escape opening; it is not attached on the sides beyond the row of meshes that lies 6 inches (15.2 cm) behind the posterior edge of the grid. The sides of the flap must be sown on the same row of meshes fore and aft. The flaps may not overlap the escape hole cut by more than 3 meshes on either side.

(i) *Standard TED flap*. The flap must be a 133-inch (338-cm) by 58-inch (148-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 sides of the flap may overlap the exit hole on either side by no more than 5 inches (13 cm). The flap may extend no more than 24 inches (61 cm) behind the posterior edge of the grid (Figure 1B illustrates this flap).

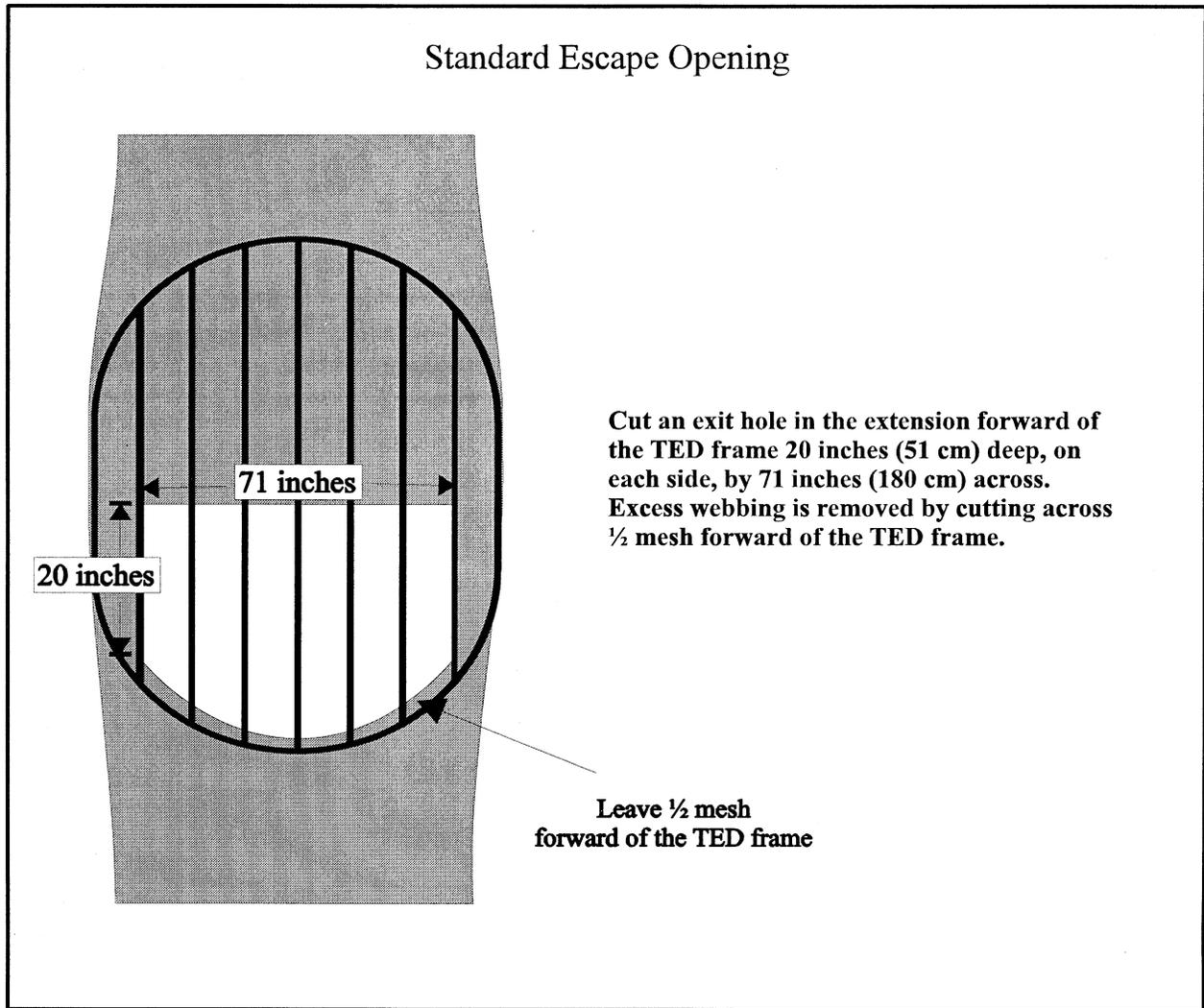
(ii) *Double cover flap TED flap*. This flap must be composed of two equal size rectangular panels of webbing. Each panel must be no less than 58 inches (147 cm) wide and may overlap each other no more than 15 inches (38 cm). The panels may only be sewn together along the leading edge of the cut. The edge of the panels may be attached 6 inches (15 cm) behind posterior edge of grid, the end of each panel must not extend more than 6 inches (15 cm) past the posterior edge of the grid (Figure 16). The sides of the flap must be sown on the same row of meshes fore and aft. The flaps may not overlap the escape hole cut by more than 3 meshes on either side. Chafing webbing described in paragraph (d)(4) of this section may not be used with this type of flap.

* * * * *

6. In part 223:

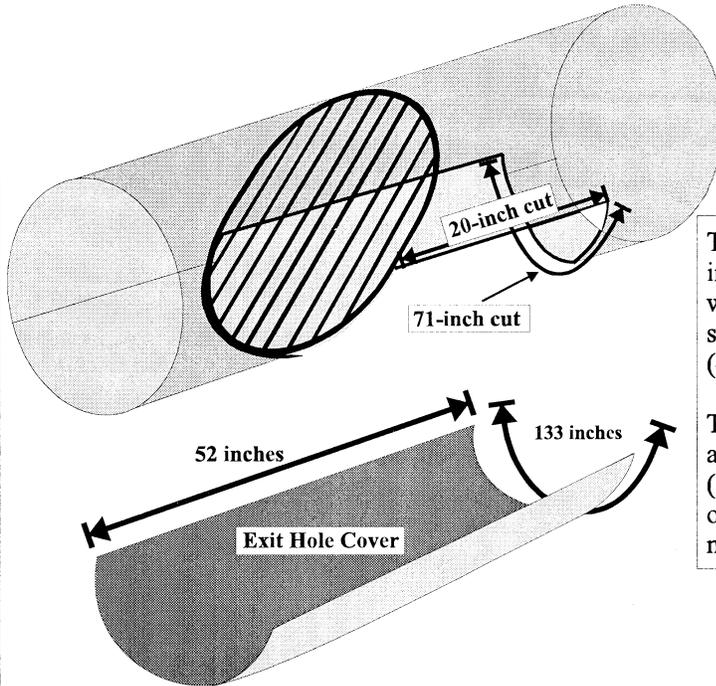
- a. Remove Figure 1, and remove and reserve Figures 2, 12A, 12B, and 15.
- b. Add Figures 1A, 1B, and 1C to part 223.
- c. Revise Figure 11 to read as follows:

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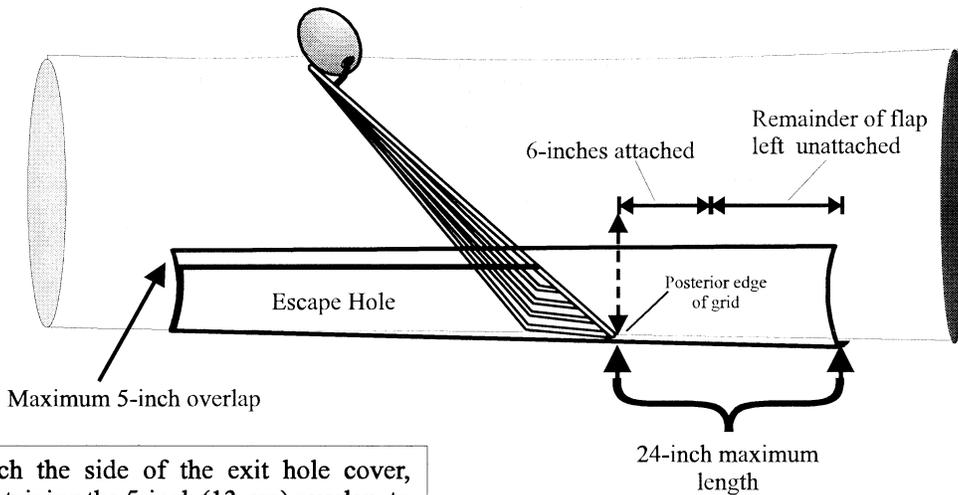
1A. Standard Opening

Exit Hole Cover for the Standard Opening



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).



Attach the side of the exit hole cover, maintaining the 5-inch (13-cm) overlap, to the side of the escape opening by sewing 22-inches (56-cm) of the cover to 20-inches (51-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.

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

Figure 1B. Exit Hole Cover for the Standard Opening

Standard TED Competed Opening

The resultant opening with a webbing flap must have a minimum straight line width of 71-inches (180-cm) stretched length at the exit opening cut.

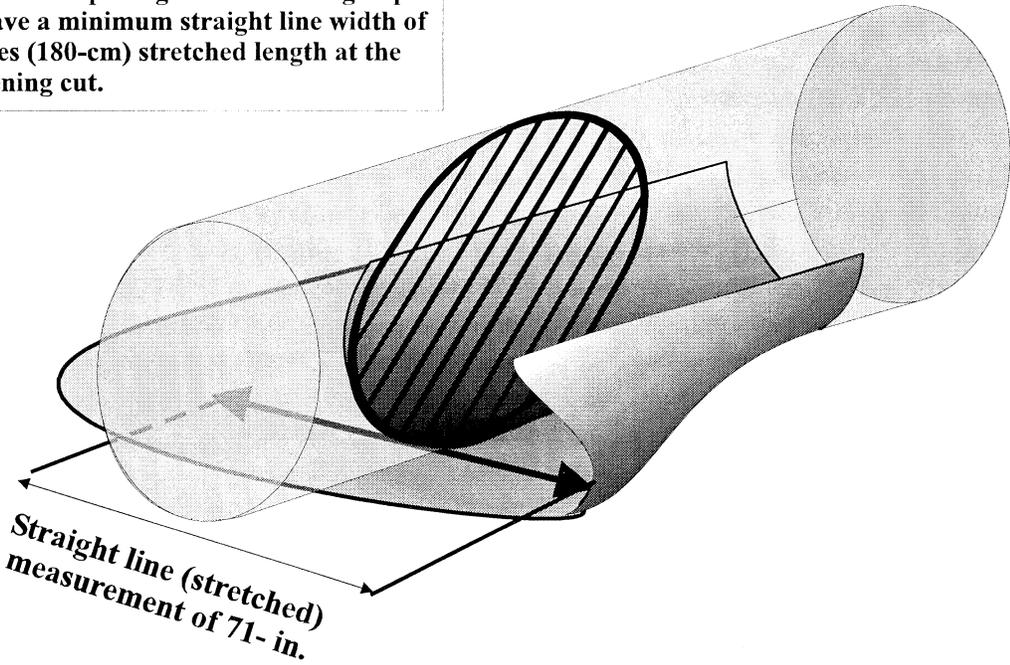


Figure 1C. Completed Standard TED Opening

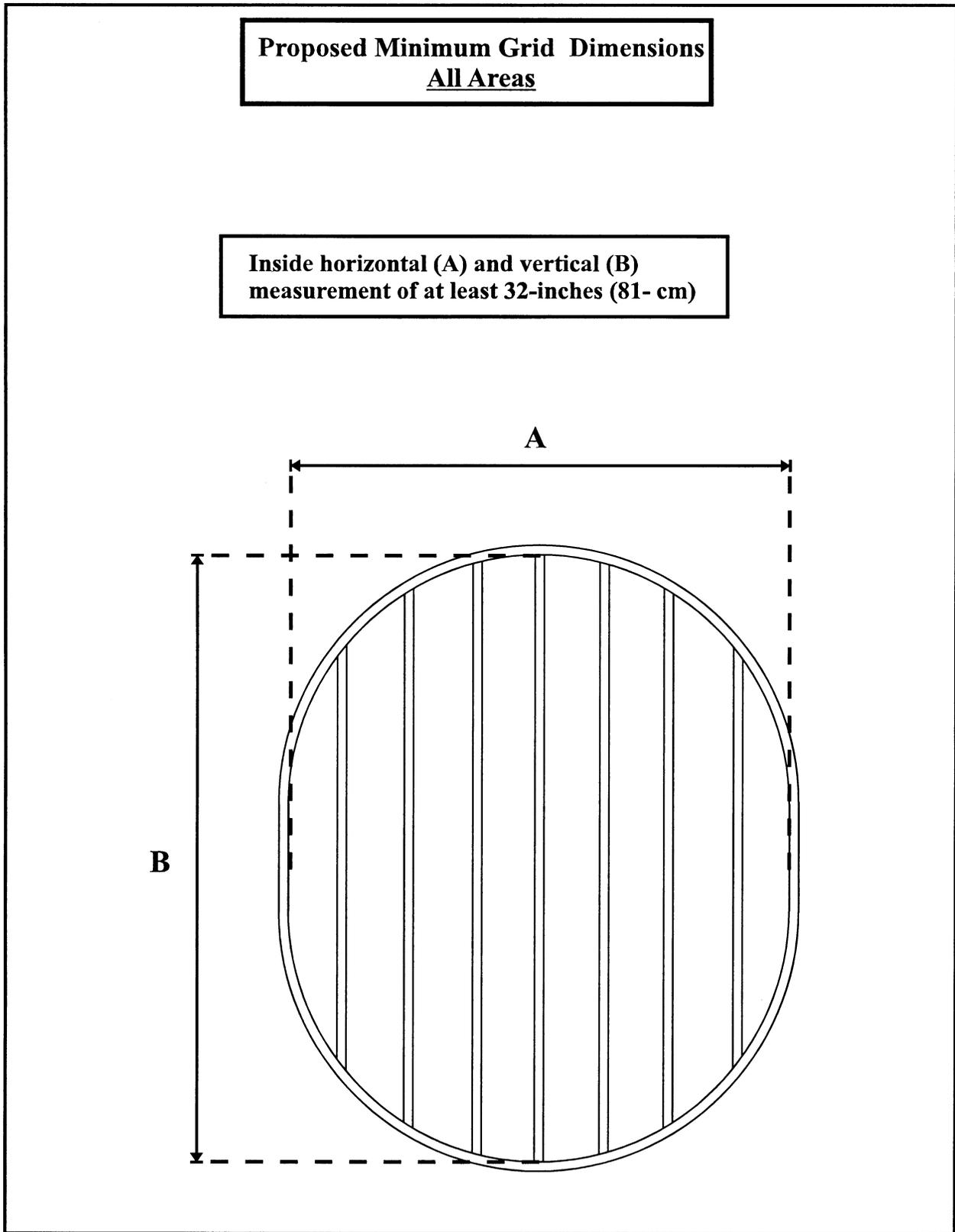


Figure 11. Standard Minimum Grid Size