LECs must offer network elements on terms and conditions equally to all requesting carriers, and, where applicable, those terms and conditions must be equal to the terms and conditions on which an incumbent LEC provisions such elements to itself or its customers. Therefore, we held that the duty to provide nondiscriminatory access imposed by section 251(c)(3) and the duty to provide resale services under nondiscriminatory conditions imposed by section 251(c)(4) mandates equivalent access to OSS functions that an incumbent uses for its own internal purposes or offers to its customers or other carriers. By January 1, 1997, to the extent that an incumbent LEC provides electronic pre-ordering, ordering, provisioning, maintenance and repair, or billing to itself, its customers, or other carriers, the incumbent LEC must provide at least equivalent electronic access to requesting carriers in the provision of unbundled network elements or services for resale that it is obligated to provide pursuant to an agreement approved by the state commission.

8. In the *First Report and Order*, we noted the progress that had been made by several incumbent LECs toward meeting their obligation to provide nondiscriminatory access to OSS functions to requesting carriers. We are encouraged by reports that this progress has continued since the release of our Order. Further, for the most part, incumbent LECs have set implementation schedules for themselves that would bring them into compliance with section 251(c) by early 1997. Therefore, we find no basis in the record for postponing the date by which access to OSS must be offered. We believe that many individual carriers are taking actions to modify their systems to provide the necessary access to OSS functions required by the 1996 Act. We also note that several state arbitrations completed thus far have adopted schedules that require substantial implementation of access to OSS functions by January 1, 1997.

9. Although the requirement to provide nondiscriminatory access to network elements and services for resale includes an obligation to provide access to OSS functions no later than January 1, 1997, we do not anticipate initiating enforcement action against incumbent LECs that are making good faith efforts to provide such access within a reasonable period of time, pursuant to an implementation schedule approved by the relevant state commission. We do not, however, preclude initiating enforcement action where circumstances warrant. We further note that providing access to OSS functions is a critical requirement for complying with section 251, and incumbent LECs that do not provide access to OSS functions, in accordance with the *First Report and Order*, are not in full compliance with section 251. *See, e.g.*, 47 U.S.C. 271(c)(2)(B) (requiring compliance with provisions of section 251 as a precondition for Bell Operating Company (BOC) entry into in-region interLATA markets).

10. We also note that, if an incumbent LEC with fewer than two percent of the subscriber lines nationwide is unable to offer nondiscriminatory access to OSS functions by January 1, 1997, it may seek a suspension or modification of this requirement from the relevant state commission. 47 U.S.C. 251(f)(2). In addition, rural telephone companies are exempt from the requirements of section 251(c), as set forth in section 251(f)(1), except when and to the extent otherwise determined by state commissions. 47 U.S.C. 251(f)(1).

11. Finally, it is apparent from arbitration agreements and ex parte submissions that access to OSS functions can be provided without national standards. See supra para. 10. We therefore reject the petitions of LECC and Sprint to delay the requirement to provide nondiscriminatory access to OSS functions until national standards have been fully developed. We conclude that such a requirement would significantly and needlessly delay competitive entry. In the *First Report and Order*, we stated that, in order to ensure continued progress in establishing national standards, we would ''monitor closely the progress of industry organizations as they implement the rules adopted in this proceeding.'' We continue to encourage parties to develop national standards for access to OSS functions, but decline to condition the requirement to provide access to OSS functions upon the creation of such standards.

12. Accordingly, it is ordered that, pursuant to sections 1–4, 201–205, 214, 251, 252, and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. 151–154, 201–205, 251, 252, and 303(r), the Second Order on Reconsideration is Adopted.

13. It is further ordered, pursuant to section 405 of the Communications Act of 1934, as amended, 47 U.S.C. 405, and section 1.106 of the Commission's rules, 47 CFR 1.106 (1995), that the petitions for reconsideration filed by the Local Exchange Carrier Coalition and the Sprint Corporation are DENIED, to the extent that they seek deferral of the January 1, 1997 date regarding access to OSS functions.

List of Subjects

47 CFR Part 1

Communications common carriers, Telecommunications.

47 CFR Part 20

Communications common carriers.

47 CFR Part 51

Communications common carriers, Telecommunications.

47 CFR Part 90

Common carriers.

Federal Communications Commission.

Shirley S. Suggs,

Chief, Publications Branch.

[FR Doc. 96–32321 Filed 12–18–96; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 217 and 227

[Docket No.950830222–6274–03; I.D. 011696D]

RIN 0648–AH89

Sea Turtle Conservation; Revisions to Sea Turtle Conservation Requirements; Restrictions to Shrimp Trawling Activities

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

ACTION: Final rule.

SUMMARY: NMFS is issuing a final rule to amend the regulations protecting sea turtles. This final rule: Requires that turtle excluder devices (TEDs) be installed in try nets with a headrope length greater than 12 ft (3.6 m) and a footrope length greater than 15 ft (4.6 m), applicable December 19, 1997; removes the approval of the Morrison, Parrish, Andrews, and Taylor soft TEDs, applicable December 19, 1997 (if improvements or modifications can be and are made to any of these soft TED designs so that they exclude turtles effectively, NMFS will institute a rulemaking to continue or reinstate the approval of any such soft TEDs as improved or modified); establishes Shrimp Fishery Sea Turtle Conservation Areas (SFSTCAs); and, within the SFSTCAs, imposes the new TED requirement for try nets, removes the approval of soft TEDs, and modifies the requirements for bottom-opening hard TEDs, effective March 1, 1997. This

final rule is necessary to enhance the effectiveness of the regulations protecting sea turtles in reducing sea turtle mortality resulting from shrimp trawling in the Atlantic and Gulf Areas in the southeastern United States.

EFFECTIVE DATE: March 1, 1997.

ADDRESSES: Requests for a copy of the environmental assessment and regulatory impact review (EA/RIR) and biological opinion prepared for this final rule, or the report on TED testing should be addressed to the Chief, Endangered Species Division, Office of Protected Resources, NMFS, 1315 East-West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Charles A. Oravetz, 813–570–5312, or Barbara A. Schroeder, 301–713–1401.

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. 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 shrimp trawling activities, have been documented in the Gulf of Mexico and along the Atlantic seaboard. Under the ESA and its implementing regulations, taking sea turtles is prohibited, with exceptions set forth at 50 CFR 227.72. The incidental taking of turtles during shrimp trawling in the Gulf and Atlantic Areas is excepted from the taking prohibition if the conservation measures specified in the sea turtle conservation regulations (50 CFR part 227, subpart D) are employed. The regulations require most shrimp trawlers operating in the Gulf of Mexico and Southeast U.S. Atlantic to have a NMFS-approved TED installed in each net rigged for fishing, year round.

In 1994, coinciding with heavy nearshore shrimp trawling activity, unusually high numbers of dead sea turtles stranded along the coasts of Texas, Louisiana, Georgia, and northeast Florida. As a result of these strandings, NMFS reinitiated consultation on the shrimp fishery pursuant to section 7 of the ESA, and concluded in its November 14, 1994, Biological Opinion (Opinion) that the long-term operation of the shrimp fishery, resulting in mortality of Kemp's ridleys at levels observed in 1994, was likely to jeopardize the continued existence of the Kemp's ridley population and could prevent the recovery of the loggerhead population. The major cause of the 1994 strandings was determined to be the improper use of TEDs by shrimpers in the Gulf of Mexico. Other causes identified were: (1) Certification of TEDs that are ineffective or incompatible with net types; and (2) intensive ''pulse'' fishing in areas of high sea turtle abundance during the spring and summer of 1994. The simultaneous occurrence of intensive fishing effort and Kemp's ridley sea turtles may have led to the repeated submergence of individual turtles in short time periods, which may have contributed to the high level of mortality.

The Opinion contained a Reasonable and Prudent Alternative and Incidental Take Statement (ITS) that required NMFS to develop and implement a Shrimp Fishery Emergency Response Plan (ERP) to respond to future stranding events and to ensure compliance with sea turtle conservation measures. As a general statement of policy, the ERP provided for elevated enforcement of TED regulations and identified management measures to be implemented in the event of elevated strandings or observed noncompliance with the regulations. The ERP identified specific stranding levels at which management measures may be implemented. A detailed discussion of the ERP was first published in a notice of availability (60 FR 19885, April 21, 1995) and again when it was revised (60 FR 52121, October 5, 1995) and is not repeated here.

Under existing regulatory authority and as described under the guidance of the ERP, NMFS implemented 30-day additional gear restrictions through temporary rulemakings four times in 1995: Twice in the Gulf of Mexico and twice in the Atlantic. The 30-day requirements included all, or some combination of, the following: Prohibition of the use of soft TEDs and bottom-opening hard TEDs, prohibition of the use of a webbing flap completely covering the escape opening on a TED, and prohibition of the use of large try nets (over 12 ft (3.6 m) headrope length) without a NMFS-approved hard TED installed. Details regarding sea turtle strandings, shrimping effort, and other sources of mortality during periods for which temporary restrictions were imposed or considered are contained in Federal Register publications (60 FR 21741, May 3, 1995; 60 FR 26691, May 18, 1995; 60 FR 31696, June 16, 1995; 60 FR 32121, June 20, 1995; 60 FR 42809, August 17, 1995; 60 FR 43106, August 18, 1995; 60 FR 44780, August 29, 1995), and supporting documents and are not repeated here.

In 1996, temporary restrictions have been implemented only once. Due to an unprecedented number of strandings and in anticipation of nearshore shrimping effort with the reopening of State waters to shrimp fishing on June 24, 1996, NMFS implemented similar restrictions to those imposed in 1995 for a 30-day period along the Georgia coast (61 FR 33377, June 27, 1996). Details regarding sea turtle strandings, shrimping effort, and other sources of mortality are contained in the temporary rule and are not repeated here.

On September 13, 1995 (60 FR 47544), an Advance Notice of Proposed Rulemaking (ANPR) announced that NMFS was considering regulations that would identify special sea turtle management areas in the southeastern Atlantic and Gulf of Mexico and impose additional conservation measures to protect sea turtles in those areas. At the same time, NMFS also announced receipt of a petition for rulemaking from the Texas Shrimp Association (TSA) to revise the current sea turtle conservation requirements for the shrimp trawl fishery in the southeastern United States. The petition was based on a report: ''Sea Turtle and Shrimp Fishery Interactions—Is a New Management Strategy Needed?'' prepared by LGL Ecological Research Associates, Inc., for TSA (LGL Report).

After extensive review of over 900 responses to the request for comments on the ANPR and the petition for rulemaking, NMFS published a proposed rule 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 in the southeastern United States (61 FR 18102, April 24, 1996; hereinafter referred to as the proposed rule). Proposed amendments were: Removing the approval of all soft TEDs, effective December 31, 1996; requiring by December 31, 1996, the use of NMFS-approved hard TEDs in try nets with a headrope length greater than 12 ft (3.6 m) or a footrope length greater than 15 ft (4.6 m); establishing SFSTCAs in the northwestern Gulf of Mexico consisting of the offshore waters out to 10 nm (18.5 km) along the coasts of Louisiana and Texas from the Mississippi River South Pass (west of 89°08.5′ W. long.) to the U.S.-Mexican border, and in the Atlantic consisting of the inshore waters and offshore waters out to 10 nm (18.5 km) along the coasts of Georgia and South Carolina from the Georgia-Florida

border to the North Carolina-South Carolina border; and, within the SFSTCAs, removing the approval of all soft TEDs, imposing the new TED requirement for try nets, and prohibiting the use of bottom-opening hard TEDs, effective 30 days after publication of the final rule.

NMFS reinitiated consultation on the November 14, 1994, Opinion based on the proposed rule, stranding-based incidental take levels that were exceeded, and new information, including preliminary analyses of the sea turtle expert working group (TEWG). On June 11, 1996, NMFS concluded that the continued, long-term operation of the shrimp fishery in the southeastern United States under the sea turtle conservation regulations as proposed to be amended by the proposed rule published on April 24, 1996, establishment of a vessel registration system, maintenance of the TED enforcement team and the TED technology transfer program is not likely to jeopardize the continued existence of Kemp's ridley and loggerhead sea turtles. Unlike the ITS in the November 14, 1994, Opinion that provided specific stranding levels for which NMFS would be required to take step-wise actions, the June 11, 1996, Opinion ITS did not make taking action contingent on specific stranding triggers. Rather, the new ITS specified that NMFS must respond to stranding events that reach unacceptable levels based on historical events.

NMFS held 10 public hearings on the proposed rule throughout the southeastern United States. In addition, NMFS reopened the comment period to provide further opportunity to submit comments and review additional analyses, including the preliminary report that was submitted July 2, 1996, by the TEWG. The formation of this group of scientists to analyze existing databases to determine sea turtle population abundance, population trends, and sustainable take levels is an important function in developing and implementing recovery plans as specified under section 4(f) of the ESA and was a requirement of the November 14, 1994, Opinion.

NMFS has conducted additional tests and investigations on trawl gear performance and sea turtle interactions that confirm information presented in the proposed rule. In particular, NMFS has further examined try nets, the use of TEDs with try nets, the function of commercial Andrews soft TEDs, and the effects of various configurations of hard TEDs on turtle exclusion efficiency. NMFS modified the proposed rule based on the results of these investigations (see below under Recent Gear Testing).

On October 1, 1996, President Clinton signed H.R. 3610, ''The Omnibus Consolidated Appropriations Act, 1997.'' The Conference Report accompanying the Act at page 819 contains language directing NMFS ''not to decertify any turtle excluder devices until every effort has been made, working with industry and others, to improve or modify existing devices to increase turtle escapement.'' Therefore, the final rule has been further modified to not remove the approval of existing soft TEDs until 1 year after the date of publication of this final rule. This will allow all presently approved soft TEDs to be used outside of the SFSTCAs for 1 year and provide time for the development and testing of improvements or modifications to existing soft TEDs (or new soft TEDs) in cooperation with the shrimp fishing industry. In addition, NMFS will work with industry to seek solutions for improving the turtle exclusion rates of soft TEDs, and will make and publish its findings prior to the 1-year removal of approval. If NMFS finds that improved or modified soft TEDs (or new soft TEDs) can effectively exclude turtles, NMFS will amend the regulations to approve such soft TEDs and allow their use.

Recent Gear Testing

Try Nets

In the preamble to the proposed rule, NMFS presented results of try net capture rates of turtles during experimental trawling at Cape Canaveral, FL, in September 1994. Those results indicated that small try nets were much less likely to capture sea turtles than large try nets. In March 1996, additional tests were conducted at Cape Canaveral to examine more carefully the relationship of particular try net sizes to turtle capture rates. In this most recent study, 100 experimental tows were made, simultaneously pulling 3 try nets of different sizes. The try nets used were mongoose design nets with headrope lengths of approximately 12 ft (3.67 m), 15 ft (4.57 m), and 20 ft (6.10 m). In 100 tows of 30–minute duration, the 20–ft (6.10–m) try net captured 17 turtles, the 15–ft (4.57–m) try net captured 10 turtles, and the 12–ft (3.67–m) try net captured 8 turtles. The turtle catch-per-unit-effort, when adjusted for the amount of headrope, was approximately the same for the three net sizes, and a linear relationship between increasing try net size and increasing turtle captures appears to exist. These testing results reconfirm that large try nets, without TEDs, will capture more turtles than small try nets.

NMFS gear experts also investigated the practical implications of installing hard TEDs in try nets of various sizes. As set forth at 50 CFR 227.72, single-grid hard TEDs must be of a certain minimum size, depending on the area where they are used: In the Gulf Area, the minimum size is 28 inches (71 cm) wide by 28 inches (71 cm) high, and in the Atlantic Area, the minimum size is 30 inches (76 cm) wide by 30 inches (76 cm) high. Gulf and Atlantic Area minimum size hard TEDs were successfully installed in try nets with 20–ft (6.10–m), 15–ft (4.57–m), and 12–ft (3.67–m) headrope lengths. Even in a 10–ft (3.05–m) headrope length try net, a Gulf minimum-size TED could be successfully installed. While all of these installations could be readily accomplished, the gear experts noted that installation of a hard TED in a try net will frequently require use of a tube of webbing to size-up the amount of webbing available in the trawl to attach to the TED extension webbing, and that the additional piece of tubing must be an appropriate length to ensure proper water flow in the try net.

Properly installed TEDs produced no significant operational difficulties. The TED-equipped try nets did exhibit a slight loss of net spread, averaging 4 percent for all tested try nets. This narrower spread could be easily compensated by the use of a slightly larger pair of trawl doors. Deployment and retrieval of TED-equipped try-nets were also assessed. Due to the low frame weight of the minimum-size, hard TEDs (a 28–inch (71–cm) single grid hard TED weighed 4.5 lb (2.05 kg)), little additional effort was needed to retrieve the tailbag of a TED-equipped try net. Finally, try nets with TEDs installed were tested for efficiency at excluding turtles. Twelve immature loggerhead turtles were released into the 3 smallest size try nets examined; all 12 turtles escaped through the TEDs.

Andrews Soft TED

In the fall of 1994, NMFS conducted underwater inspections and sea turtle exclusion testing on commercially available Morrison soft TEDs. That study revealed a high level of variability in soft TED installation among commercial net suppliers. That variability included a number of poorly installed TEDs that, despite meeting regulatory requirements, had slack areas and pockets that entangled sea turtles. NMFS believes that proper installation of soft TEDs is extremely difficult and that net makers are unable to evaluate

their own soft TED installations without the benefit of in-water examinations. In part, this was a reason for NMFS' proposal to remove the approval of all soft TEDs.

The Andrews soft TED is constructed of 5–inch (12.7–cm) stretched-mesh webbing, the smallest mesh size of any approved soft TED. Over the years, the Andrews soft TED has been tested with a variety of larger webbing sizes, but only the 5–inch (12.7–cm) design has been approved TED. The Andrews soft TED also employs a ''net-within-a-net'' design, whereas the other soft TED designs employ a panel separating the top and bottom of the trawl. The panel design of the other soft TEDs means that the edges of the excluder panel are attached to different parts of the trawl and that any changes in fishing configuration, even due to normal operations, can result in changes in the shape and therefore the effectiveness of the soft turtle excluder panel. The mouth and the exit opening of the Andrews TED's inner net is attached to the main trawl, with the top, sides, and bottom of the inner net unattached. This is referred to as a four-panel design. Also, some Andrews soft TEDs are installed using the bottom panel of the main trawl as the bottom panel of the inner net—a three-panel design. The shape of the inner net of the Andrews TED was believed to be less dependent on the shape of the main net because of the net-within-a-net design, and the smaller mesh size of the Andrews soft TED was believed to generate more drag and, consequently, a more consistent shape than other soft TED designs.

In June 1996, NMFS conducted in-water evaluations of commercially available Andrews soft TEDs to determine whether the Andrews soft TED was less susceptible than other types of soft TEDs to installation variability with consequent slack webbing and pocketing that might entangle turtles. Five identical style nets were purchased from commercial industry net suppliers. Two were equipped with three-panel Andrews TEDs, and three were equipped with four-panel Andrews TEDs. Diver observations found that four of the five Andrews soft TEDs had some areas of slack webbing and pockets, with varying degrees of severity. Only one installation exhibited smooth webbing throughout. The five Andrews soft TED installations were tested for effectiveness at sea turtle exclusion, using the small turtle TED testing protocol (55 FR 41092, October 9, 1990). A total of 42 turtles were introduced into the Andrews TED-equipped nets; 21 were captured and failed to escape during the allotted 5–minute escape time. The rate of turtle capture in the different Andrews soft TED installations did not appear to be strongly influenced by the quality of the installations or the degree of slack and pocketing in the inner net. Rather, a very high proportion of the turtles became captured when they encountered the wing panels (the side portions) of the inner nets. For turtles that entered the trawl to the left or right of the center of the net, 21 out of 30 became captured when they became impinged or entangled in the wing panels. For turtles that entered the trawl at top dead center, 12 out of 12 escaped the trawl easily, as they only encountered the top panel of the inner net. The small turtle TED testing protocol requires the use of a control TED, against which the performance of the candidate TED is measured. The control TED accounts for the possibility of variability in the testing conditions and the fitness of the turtles which may affect the observed escape rate for a candidate TED and serves as the standard whose performance must be equaled or exceeded (within statistical limits governed by the sample size) by a candidate TED. During the June 1996 test period, the control TED released 25 out of 25 turtles, with turtles being released into the trawl at center positions and positions left and right of center. The 50 percent capture rate (21 out of 42 turtles) documented for the five Andrews soft TED installations was significantly higher than for the control TED. The performance of each Andrews soft TED installation, when taken separately, was also statistically significantly worse than the control TED.

The results of the Andrews soft TED testing revealed a problem with soft TEDs that had previously not been considered, but that confirms basic design problems with soft TEDs generally. The extremely high capture rates for turtles that encountered the wing panels were apparently independent of the quality of the TED installation. Likewise, the high escape rates of turtles that traveled along the top panel of the inner net also appeared to be independent of the quality of the TED installation. The quality of the installation appeared to have less impact on turtle capture than the basic design of the TED. The wing panels in the Andrews soft TED inner net have a high angle of incidence with the water flow through the trawl. This angle is a result of the sharp tapering of the wing panels from the sides of the mouth of the main trawl (which may spread up to 50 ft (15.2 m) or more) to the exit hole in the throat of the main net. The top panel, on the other hand, has a very low angle of incidence to water flow, as it tapers from a height of approximately 2–4 ft (0.61–1.22 m) (up to a maximum net mouth height of 10–11 ft (3.05–3.35 m)) down to the exit hole in the bottom of the main net. Turtles that only encountered the top panel of the Andrews TED's inner net slid easily along its gradual slope. Turtles which encountered the wing panels, however, were impinged against the webbing due to the high angle of incidence to the water flow, and were unable to exert any effective force against the flexible webbing of the excluder panel to remove themselves. The angle of incidence of the wing panels to the water flow was approximately 45° in these Andrews TED installations, which is the recommended angle of incidence for single-grid hard TEDs. With hard TEDs, however, turtles are able to push effectively against the rigid deflector bars and avoid impingement.

Single-Grid Hard TEDs

The relative efficiency of various installations of a curved bar single-grid hard TED (Super Shooter style) and a straight bar single-grid hard TED (Georgia Jumper style) were evaluated through diver observations and small turtle release testing in June 1996. The purpose of these evaluations was to determine whether TED design and installation variables such as grid angle and flap length are significant factors in the exclusion of sea turtles. Previous studies that only examined curved bar style TEDs had shown that turtles required longer to escape from bottom-opening hard TEDs than top-opening hard TEDs and that reducing the flap length on top-opening hard TEDs further reduced the average turtle escape time.

The June 1996 testing generally reconfirmed the earlier results of faster escape times for top- vs. bottom-opening hard TEDs and for TEDs with a shortened webbing flap over the escape opening. The June 1996 testing also revealed differences in turtle exclusion effectiveness based on the style of grid used and the grid angle. The curved bar grid TED was more effective at excluding turtles than the straight bar grid TED when both were installed at a 53° angle to the water flow (near the maximum 55° allowed under the current regulations) and equipped with a webbing flap (as defined at 50 CFR 227.72) over the escape opening of 24 inches (70.0 cm—the maximum length allowed under the current regulations). In a top-opening configuration, the curved bar TED successfully excluded

25 out of 25 turtles, while the straight-bar TED excluded 8 out of 10 turtles. In a bottom-opening configuration, the curved bar TED excluded 9 out of 10 turtles, while the straight-bar TED excluded only 1 out of 8 turtles. The turtle escape time required was not significantly different between the curved and straight bar grids in each configuration. To further examine the factors affecting the observed poor performance of the bottom-opening, straight bar grid TED, the TED was reinstalled with a 43° angle to the water flow. This angle change significantly improved the turtle escape success to six out of nine turtles, without a significant change in escape time. Next, the straight bar TED was tested at a 43° angle with the webbing flap shortened to extend no further than the bars of the TED. The shortened flap length improved the turtle escape success to eight out of nine turtles and significantly reduced the average escape time required from 114.2 seconds to 44.9 seconds. The effect of a shortened webbing flap was also examined with the bottom-opening, curved bar TED, installed at 55°. Relative to the full-length flap, this modification increased the turtle escape success to 10 out of 10 turtles, but did not significantly change the average escape time required. A curved bar TED was also tested at a very low installation angle of 30°, in a bottom-opening configuration with a full-length flap. The very low angle of installation did significantly reduce the average escape time required from 86.2 to 31.4 seconds, compared to a 55° installation, but it did not change the turtle escape success, which remained at 9 out of 10 turtles. Finally, both the curved bar TED and the straight bar TED were tested in bottom-opening configurations with the webbing flaps shortened, the required floats removed, and the TEDs riding on the sea floor. When riding on the bottom, the curved bar TED excluded zero out of five turtles, whereas the straight bar TED excluded four out of five turtles.

A complete report of the June 1996 TED testing results has been prepared by the NMFS Southeast Fisheries Science Center. Interested parties may request a copy (see **ADDRESSES**).

Comments on the Proposed Rule

NMFS received approximately 5,600 responses to the request for comments on the proposed rule, both at the public hearings and by letter. NMFS reviewed all comments and has grouped them for response according to general subject matter. References are made only to some organizations or associations and not to all of the groups or private individuals who may have made similar comments. Many comments were received that essentially repeated comments that had been given regarding the ANPR and to which NMFS responded in the preamble to the proposed rule. NMFS has reviewed its responses to those comments (61 FR 18102, April 24, 1996) based on this most recent round of comments and new information, and reconfirms those responses except as otherwise noted below.

Justification for the Final Rule

Comment 1: More than 5,200 comments were received that expressed strong support for additional sea turtle protections, including the measures contained in the proposed rule. Supporters of additional sea turtle protections pointed to the still critically low number of nesting Kemp's ridley sea turtles, the apparent lack of recovery of loggerhead sea turtles, and the continued association of high sea turtle strandings with high shrimping effort. A large number of commenters, however, mostly from within the shrimping industry, questioned the need for any additional protection for turtles from the impacts of shrimp fishing. Opponents of additional protective measures discussed the increasing number of Kemp's ridley nests and the probable role that prior TED use has played in that increase, the high levels of observed compliance with TED requirements in the shrimp industry, and alleged that unacceptable costs would accrue to the shrimp industry from the measures in the proposed rule.

Response: The report from the TEWG confirmed that the number of Kemp's ridley nests has been increasing since 1987, and there also appears to be an increase in the survival rates of benthic immature and adult Kemp's ridleys after 1989, corresponding with the beginning of widespread TED-use. The TEWG estimated the total adult female population of Kemp's ridleys in 1995 to be 1,500 individuals, dramatically fewer than the 40,000 females that were observed nesting on a single day less than 50 years ago and far less than the delisting criterion to attain a population of at least 10,000 nesting females specified in the recovery plan. For loggerheads, the TEWG found that the sub population, which nests from northeast Florida through North Carolina (the South Atlantic shrimping grounds), is not recovering. The south Florida loggerhead sub-population was found to have increased over the past 25 years, but no significant population trends were seen over the last 7 years. In addition, the decreasing proportion of immature loggerheads in this sub-population may have negative future implications for the recovery of loggerheads.

NMFS is responsible under section 7(a)(1) of the ESA to use its authorities to conserve listed species. NMFS is also responsible for developing and implementing recovery plans and protective regulations under section 4 of the ESA. Thus, a series of regulatory actions and biological opinions have recognized and attempted to address the continued problem of high sea turtle strandings associated with shrimp fishing (see Background). Among the identified causes of the continued strandings have been the improper use of TEDs and the use of inefficient TEDs by shrimp fishermen. Even with high regulatory compliance in the shrimp industry, the use of ineffective TEDs will undermine sea turtle protective measures, perpetuate turtle strandings related to shrimp trawling, and create the need for intermittent, reactive measures to manage negative shrimp trawling/sea turtle interactions.

NMFS considered a variety of management options for reducing sea turtle mortality in the shrimp fishery. The EA/RIR for this final rule (see **ADDRESSES**) fully evaluates all the considered alternatives, and the measures selected for this final rule were determined to have the least adverse impact on the shrimp trawling industry, while accomplishing the objectives of reducing shrimp fishing-related turtle mortality.

Comment 2: Many commenters questioned the proposed rule's focus on enhancing the effectiveness of approved TEDs and recommended that shrimp trawling effort be reduced in addition to, or instead of, the measures of the proposed rule. More than 5,200 proponents of the proposed rule also stated that the proposed measures did not go far enough to address problems of excess effort in the shrimp fishery. An industry organization, TSA, commented that introduction of changes to the present TED requirements was inappropriate and that measures to reduce nearshore shrimping effort should be adopted instead. Specifically, TSA again urged adoption of its petition for rulemaking (LGL Report).

An additional fishing effort-reduction proposal was given by the Georgia Fishermen's Association and multiple Georgia fishermen who urged NMFS to adopt a nighttime closure of Federal waters off Georgia to shrimping that would be complementary to current state closures.

Response: NMFS had previously sought public comments on the LGL

Report and responded to those in the proposed rule for this action (61 FR 18102, April 24, 1996; see comments 6 through 9). NMFS has further considered the petition in light of comments received on the proposed rule and analyzed its components as alternatives in the EA/RIR prepared for this final rule (see **ADDRESSES**).

NMFS agrees that heavy nearshore shrimping effort contributes to sea turtle mortality. Management measures that would reduce nearshore shrimping effort likely would also reduce sea turtle strandings. If nearshore shrimping effort results in sea turtle mortality, it is because turtles are either being entrapped in ineffective TEDs, being submerged for an excessive period of time in trawls with TEDs with slow release times, or being captured in try nets that are not equipped with TEDs. Repeated capture under any of these conditions would further increase the likelihood of sea turtle mortality. The shrimp fishery effort limitation plans that have been proposed to NMFS to date would have significant catch allocation consequences and possible widespread socio-economic ramifications. Some sectors of the fishing industry would bear significant adverse economic impacts without a significant improvement to the protection of sea turtles. Most of the effort-reduction measures considered have already generated significant controversy in the shrimp industry. NMFS will continue to evaluate the feasibility and benefits of various means to reduce intense nearshore shrimping effort, but does not believe that current information on biological benefits and socio-economic impacts is sufficient to justify implementing major effort reduction measures at this time. NMFS believes that the modifications to the gear requirements made by this final rule will lessen the adverse impacts from heavy nearshore shrimping effort. Effort reduction measures should be considered after available technological solutions are exhausted.

Soft TEDs

Some comments regarding soft TEDs were general, either supporting or opposing their prohibition. Most commenters who made remarks on soft TEDs, though, specifically addressed particular soft TED designs, especially the Andrews soft TED.

Comment 3: Fishermen and shrimp industry representatives, particularly from the southwest Florida area, objected strongly to removing the approval of the Andrews soft TED. Some argued that the evidence presented in the preamble to the proposed rule to support the prohibition of soft TEDs was applicable to the Morrison and Taylor TEDs, but not to the Andrews TED. They stated that the Andrews TED, due to its design, could be consistently installed correctly. Other commenters recommended that, if proper installation is critical for Andrews soft TEDs, a limited number of net makers be allowed to continue making Andrews TEDs if they pass a certification test that proves their ability to consistently install the TEDs correctly. Fishermen stated that the Andrews TED was the only type of TED that would work in the southwest Florida fishery because of its ability to exclude the large sponges that are encountered there. Some commenters stated that, even if all soft TEDs are prohibited, an exemption should be created to allow the continued use of the Andrews TED in the southwest Florida area. Other advocates of the Andrews TED pointed to its valuable bycatch reduction characteristics as justification for its continued use. Some commenters discounted the Andrews TED's high shrimp loss rates as a problem, asserting that shrimpers should be allowed to select their own gear type regardless of its performance.

Response: NMFS conducted additional testing to evaluate the performance of commercially available soft TEDs (see Recent Gear Testing above). In those tests, the Andrews soft TED performed poorly at excluding turtles. In four out of five commercially produced Andrews soft TEDs, there were significant pockets and slack areas in the webbing. The excessive level of turtle captures in the Andrews TEDs appeared to be independent of the quality of the TED's installation, however. While poor, inconsistent installation did appear to be a problem with the Andrews soft TED, inherent problems with the use of soft webbing were responsible for the turtle captures observed. The turtles' inability to free themselves from flexible webbing, even when the webbing is taut with a mesh size as small as 5–inch (12.7–cm) stretched mesh, is illustrative of the inherent difficulties with using webbing as an excluder panel. Certification of net makers to ensure consistent installation of Andrews TEDs would not address that problem.

The Andrews TED has been the TED of choice in the southwest Florida fishing grounds. The Andrews TED has a large exit opening out of the bottom of the trawl and can exclude the large sponges encountered in that fishing area. Bottom-opening hard TEDs are equally able to exclude sponges and large debris. In southwest Florida, increasing numbers of vessels are using very large bottom-opening hard TEDs with curved bars. When the webbing flap over the escape opening is shortened or split, these TEDs also get rid of the sponge debris that is unique to the southwest Florida shrimping grounds. Hard TEDs also have much better shrimp retention than the Andrews TED. Consequently, viable options do exist to the use of the Andrews soft TED in southwest Florida.

NMFS is aware of the Andrews soft TED's excellent finfish reduction characteristics, but the primary purpose of TEDs is the exclusion of sea turtles incidentally captured in trawls. The most recent testing data show that the Andrews soft TED, as presently designed, is ineffective at excluding turtles. Bycatch reduction devices have been designed that work in conjunction with approved hard TEDs and that result in much lower shrimp loss than the Andrews soft TED. While NMFS has dual charges to conserve endangered species as well as commercially valuable marine resources, the ESA requires that Federal actions, including fisheries management, be conducted in a manner that minimizes impacts to endangered and threatened species and promotes their recovery.

Comment 4: Some commenters stated that problems with soft TEDs resulting from improper installation, unrepaired holes in nets, and illegal webbing sizes should be addressed through enhanced enforcement and not through elimination of this TED type.

Response: NMFS is concerned about the difficulty of inspecting soft TEDs aboard trawlers and enforcing regulatory compliance for soft TEDs. Holes are frequently cut in soft TEDs through normal wear and tear, and fishermen have reported that turtles are sometimes captured when they pass through them. The suggestion that improved enforcement efforts could solve all of these problems has proven impracticable. The most recent testing data, however, have shown that basic design problems may result in more turtle captures in the Andrews soft TED than improper installation or holes in the webbing.

Comment 5: Several commenters objected to the elimination of the provision of the regulations which allow new soft TED designs to become approved. Future approval of new soft TED designs should be permitted to allow for innovations that may prove effective in excluding turtles.

Response: NMFS believes that the problems inherent in using soft webbing material as a turtle excluder are serious and widespread. These problems have

been demonstrated in the currently approved soft TEDs. NMFS recognizes, however, that there are positive attributes of soft TEDs. These positive attributes include their low purchase cost (although that low cost is offset by more frequent repairs and replacements), their collapsibility and ease of stowage, and, in the case of the Andrews TED, excellent rates of bycatch reduction. NMFS is also mindful of a strong desire, expressed by shrimp fishermen and the Congress, to continue using soft TEDs.

Since the currently approved soft TEDs have been shown to be ineffective at excluding sea turtles, improvements or modifications to existing soft TEDs to increase sea turtle escapement must be made to allow shrimp fishermen to continue using these existing soft TED designs for a long term. NMFS intends to undertake intensive efforts to identify technical solutions or modifications for soft TEDs that will make them effective at excluding sea turtles. NMFS will seek the advice of a panel of gear experts and industry and environmental stakeholders to propose solutions for soft TEDs (see comment 15 below). This process should produce multiple initiatives for further evaluation, possibly including entirely new soft TED designs. If any of these initiatives produce a soft TED that is demonstrated to effectively exclude turtles, it will be approved for use without delay. If no solutions can be found to improve the performance of soft TEDs, this final rule automatically will remove the approval of those TEDs in 1 year. Delaying removing the approval of soft TEDs for 1 year, allows shrimpers to continue to use for that period the presently approved soft TEDs in all areas outside of the SFSTCAs. This 1-year period may allow the shrimp industry to develop innovations that will significantly improve the effectiveness of soft TEDs in excluding turtles. It would also avoid adverse impacts to fishermen who could continue to use their preferred gear for 1 year and, if effective modifications to their soft TEDs are developed, thereafter. Thirty days prior to the end of the 1-year period, NMFS will publish a notification of the results of the soft TED improvement initiatives and associated testing. This notification will include a determination regarding existing soft TEDs for which no improvements or solutions are found and for which the approval will be removed by this rule. Improvements or modifications to existing soft TED designs which effectively exclude sea turtles will also be identified and addressed in that notification. NMFS intends that successful improvements and modifications to existing soft TEDs that result in such TEDs effectively excluding sea turtles will be incorporated in the TED regulations through rulemaking.

Under the current process of TED approval, two scientific testing protocols have been approved by NMFS determining whether a TED excludes turtles at a 97 percent or greater rate. These two protocols were published previously (52 FR 24262, June 29, 1987; and 55 FR 41092, October 9, 1990) and are referenced in the existing regulations at 50 CFR 227.72(e)(5). As discussed above, soft TEDs have deficiencies which are not addressed by the existing protocols. Consequently, NMFS will no longer use strictly these protocols in testing soft TEDs. While no generic protocol has yet been developed for testing soft TEDs, NMFS will expeditiously test soft TEDs on a case-by-case protocol basis that addresses the problems identified in the preamble of this rule, and thus assures that any soft TED subsequently approved will adequately exclude turtles (i.e. will exclude turtles at a 97 percent rate or statistical equivalent).

NMFS is interested in possible innovations that can provide sea turtle protection from the adverse impacts of shrimp trawling. These innovations may include alternatives beyond simply introducing improved soft TED designs. In fact, NMFS has solicited proposals from academic institutions and the shrimp industry for the development of alternatives to the use of TEDs for sea turtle protection. The solicitation was published in the Commerce Business Daily on July 30, 1996. NMFS will be continuing this initiative to develop alternatives to TEDs, while also working intensively to identify improvements or modifications for soft TEDs.

Comment 6: One commenter stated that problems observed with the Morrison soft TED are, in part, attributable to its regulatory specifications and problems with turtle capture only occur in certain types of straight wing flat nets and in a type of tongue trawl under certain adjustments.

Response: This comment underscores several problems with soft TEDs in general, not just the Morrison TED. NMFS has found that soft TEDs that meet regulatory specifications can vary greatly due to differences in installation techniques and the size and style of trawl nets in which they are installed. Trawl nets are often custom-made for each fisherman. The potential number of combinations of trawl styles and sizes is tremendous. Specifying soft TED dimensions and installation procedures for each combination would be impossible, as would be testing each of these combinations for its effectiveness at excluding turtles. The shape of each net and soft TED excluder panel can then be further modified during shrimping operations through the addition of floats to the headrope, changing trawl door sizes or trawl speed, or adjusting center bridle tension. NMFS agrees that the types of trawls mentioned by the commenter are incompatible with the Morrison TED. Many other sizes and styles of nets are also likely to be incompatible with the Morrison TED, but determining which ones would be a very difficult task. Efforts to develop effective soft TEDs will likely have to address the problems with soft TEDs highlighted by this comment.

Try Nets

Comment 7: Most comments regarding the proposed removal of the exemption of large try nets from required TED use were specific to the try net size criteria. Recommendations were made that TEDs should be required in try nets ranging from 15–18 ft (4.6–5.5 m) headrope length. These sizes were suggested because they were more in keeping with the size of try nets traditionally used by fishermen in various areas. Many fishermen stated that TEDs could not be installed in, or would not work in, try nets as small as 12 ft (3.6 m) headrope length and 15 ft (4.6 m) footrope length. In addition, some fishermen stated that 12–ft (3.6–m) try nets cannot be used to sample shrimp catches. Some fishermen stated that, particularly when fishing for white shrimp, a large try net is used, often with extra flotation or a tongue or bib, to sample a large amount of the water column, and a small try net would not be an effective replacement. Some commenters argued that TEDs should not be required in try nets of any size because fishermen limit their tow-times with try nets.

Response: NMFS conducted gear testing (see Gear Testing Results), which demonstrated that hard TEDs can be installed in try nets as small as 12 ft (3.6 m) headrope length. Use of TEDs in small try nets was found to pose no significant operational problems.

Many commenters showed a slight misconception of the proposed changes in the TED exemption for try nets; some objected to prohibitions of large try nets or requiring TEDs in very small try nets. Try nets with a headrope length of 12 ft (3.6 m) or less and a footrope length of 15 ft (4.6 m) or less would not require a TED under the measures of the proposed rule. NMFS expects that

fishermen using this size of try net will elect not to install a TED in that size try net, even though it is technically and operationally possible. Fishermen who can effectively use a small try net, or those who do not wish to use a TED in a try net, will likely use try nets with a 12–ft (3.6–m) or smaller headrope length. Contrary to the assertions of some commenters, small try nets are effective at sampling catch rates. In fact, the States of Mississippi and Alabama require that try nets used in their inshore waters be no larger than 12 ft (3.6 m) and 10 ft (3.0 m) headrope length, respectively. Fishermen who believe that a larger try net is necessary may use a try net of any size they wish, but a TED must installed. NMFS specifically tested large try nets equipped with tongues, which was the preferred gear specified by some commenters for sampling white shrimp. These large try nets worked well with TEDs.

NMFS disagrees with the rationale that the size of TED-exempt try nets should be selected based on the size of try nets preferred by most fishermen. The use of larger try nets without TEDs in commercial shrimping results in captures of turtles with no possibility of escape. These captures contribute significantly to the number of documented turtle takes and likely contribute to continued shrimping-associated strandings of sea turtles. While NMFS strives to minimize the number of fishermen impacted by regulatory changes, selection of a TED-exempt try net size that would produce no effective change in the gear used in the commercial fleet nor its impacts on turtles would be of little value. NMFS has determined that TED exemptions can be continued for try nets of 12 ft (3.6 m) or less headrope length and 15 ft (4.6 m) or less footrope length. This size will provide reasonable options for fishermen to use gear without TEDs, while minimizing the possibility of turtle capture. To minimize effects on the shrimping industry, NMFS is implementing the changes to the TED-exemption for try nets through a phase-in approach.

Bottom-opening Hard TEDs

Most commenters who provided comments specific to the proposed measure of prohibiting the use of bottom-opening hard TEDs in the SFSTCAs were opposed, at least in part, to this measure. Multiple reasons were given and are responded to separately.

Comment 8: Bottom-opening hard TEDs are a necessary option for fishing in certain conditions. Commenters at the public hearings in Charleston, SC, and Brunswick, GA, in particular, objected to the proposal to prohibit the use of bottom-opening hard TEDs in the SFSTCAs. Fishermen from other areas, some environmental organizations, and some state natural resource agencies also spoke in favor of bottom-opening hard TEDs. Many commenters stated that bottom-opening TEDs are required to allow the exclusion of heavy debris that occurs in certain fishing areas. If debris cannot be excluded in top-opening hard TEDs, they argued, the turtle escape opening may become clogged, hindering sea turtle release and causing shrimp loss.

Response: NMFS recognizes that the ability of bottom-opening hard TEDs to exclude debris is a desirable quality for many fishermen. Many items like sponges, horseshoe crabs, shells, and pieces of wood can be excluded, reducing the fisherman's catch-culling time and the potential for damage to gear from wear and tear. This advantage of bottom-opening TEDs may only provide enhanced turtle exclusion under limited circumstances, as a large amount of these small debris items would have to accumulate to obstruct a top-opening TED. Fishermen cited certain types of large debris, such as abandoned crab traps, tree stumps, and empty drums as posing a threat to turtles in top-opening hard TEDs. In fact, these types of debris are more likely to obstruct the escape opening of a bottom-opener since they will lie in the bottom of the trawl, and it is not certain that large pieces of debris will passively find their way through the escape opening in a bottom-opening hard TED using an optional webbing flap of the maximum allowable length. Turtles may still be able to go over a large piece of debris to escape through a top-opening TED. Very large debris items that completely obstruct the throat of the trawl net are unlikely to be excluded from a top- or a bottom-opening hard TED and may result in turtle captures.

Comment 9: Some commenters also argued that slower escape times from bottom-opening hard TEDs compared with top-openers are not important contributors to turtle mortality and that NMFS testing data showed that properly floated bottom-opening hard TEDs were effective at releasing turtles. Some commenters criticized NMFS' methods of testing TEDs as unrepresentative of actual commercial trawling conditions, and thus, as unrepresentative of the actual escape times for sea turtles.

Response: NMFS agrees that its TED testing methods are not completely representative of commercial trawling conditions. The possibility for turtle capture in a TED under commercial trawling conditions may be greater under some circumstances, such as the presence of debris in the trawl and the weight of catch or mud forcing the TED to ride on the sea floor. Under commercial trawling conditions, turtles are captured after already being submerged for an unknown length of time and after some are exhausted from fleeing the trawl that overtakes them. Turtles captured under commercial trawling conditions may have little or no visual means to find a TED's escape opening, due to turbid water or night. These difficulties are not present during NMFS' testing of TEDs. On the other hand, TED testing uses small turtles, slightly larger than the minimum size turtles that strand in the southeast United States. Adult or large juvenile turtles may be better able to escape under some conditions due to their greater strength. The small turtle TED testing protocol requires the use of a control TED, against which the performance of candidate TED is measured. The control TED accounts for the possibility of variability in the testing conditions and the fitness of the turtles, which may affect the observed escape rate for a candidate TED, and serves as the standard whose performance must be equaled or exceeded (within statistical limits governed by the sample size) by a candidate TED.

In TED testing conducted during May 1995, NMFS observed that small turtles require almost twice as long to escape from a bottom-opening TED vs. a top-opening TED (an average of 125.6 seconds vs. an average of 68.8 seconds). These tests were conducted using a curved-bar style grid TED, under ideal conditions, and the TED had a perfect turtle exclusion record in both the top-opening and bottom-opening configuration. The June 1996 TED trials included comparisons to examine more closely the effects of various single-grid hard TED configurations on TED efficiency (see Gear Testing Results). The June 1996 tests revealed previously unknown problems with turtle capture in straight-bar, bottom-opening TEDs installed at high angles and fitted with long webbing flaps. Shortening the webbing flaps and lowering the angles of straight-bar, bottom-opening TEDs reduced the turtle capture rate and the mean TED escape time. Shortening the webbing flap on the curved-bar bottom-opening hard TEDs also reduced the turtle capture rate. These changes allowed the performance of the bottom-opening hard TEDs to approach that of the control, top-opening curved-bar

style TED, which had a perfect turtle exclusion rate and a fast mean TED escape time.

The June 1996 TED testing revealed that some configurations of bottom-opening hard TEDs may have a problem with high turtle capture rates. Obviously, turtle capture in a TED poses a greater threat to a turtle than a longer escape time. By reducing the straight-bar, bottom-opening TED's angle and shortening its flap, however, both the turtle escape success and the average escape time were improved, and with the curved-bar TEDs, shortening the webbing flap resulted in 100 percent turtle-escape success. NMFS is still concerned that repeat captures and forced submergences in shrimp trawls, compounded by longer release times from TEDs, could be producing stress and blood acidosis levels that are contributing to the mortality of sea turtles, particularly small juveniles and sub-adults. The June 1996 TED testing showed, however, the need to take measures that will minimize the possibility of turtle captures in TEDs, not just reducing escape times. These measures are justified based on turtle capture rates alone, regardless of the physiological effects of forced submergence.

Comment 10: Comments from some fishermen and environmental organizations distinguished between the need for bottom-opening hard TEDs in the Atlantic and the Gulf of Mexico. These commenters stated that the bottom types (either soft mud or sand) and the presence of sand waves, high tides, and large amounts of debris in the Atlantic necessitated the use of bottom-opening hard TEDs. In addition, they pointed to the use of bottom-opening hard TEDs with bar spacings of only 2 inches (5.1 cm) by some shrimpers in the Atlantic, and stated that these types of TEDs were less likely to catch sea turtles. An environmental organization stated that the average size of turtles in the Atlantic shrimping area is larger than in the Gulf, and restrictions on bottom-opening TEDs are therefore not necessary in the Atlantic.

Response: NMFS disagrees. Fishermen in the Gulf of Mexico also must contend with a variety of bottom-types, large amounts of debris in certain areas, and high flow areas, especially near the Mississippi River. The straight-bar grid TED that was tested by NMFS in June 1996 had a 2–inch (5.1–cm) bar spacing, and it exhibited some problems with turtle captures before modifications were made (see Gear Testing Results). There may be a higher proportion of small turtles, particularly juvenile Kemp's ridleys, in the Gulf than in the Atlantic, but juvenile ridley, loggerhead, and green turtles occur in the Atlantic shrimping grounds. Strandings suggest that shrimping in the Atlantic continues to impact these juvenile turtles, too.

Comment 11: Some commenters from industry and environmental groups and state natural resource agencies suggested that, if restrictions to bottom-opening hard TEDs are necessary, the webbing flap over the escape opening be shortened to reduce sea turtle escape time and the possibility of entrapping a turtle when the TED rides on the sea floor. Some Georgia shrimpers stated that they already use bottom-opening hard TEDs with shortened flaps to allow large debris to drop out.

Response: NMFS agrees. The June 1996 TED testing results showed that shortening the webbing flap is necessary for bottom-opening hard TEDs to achieve acceptable turtle capture rates and average turtle escape times. Additionally, the testing showed that turtle escape is still possible from a straight-bar TED with a shortened webbing flap, even when the TED is riding on the sea floor. Although there may be some concern among shrimpers about shrimp loss with a shortened webbing flap, NMFS believes that allowing the continued use of bottom-opening hard TEDs with a shortened webbing flap is responsive to the comments and preferences of many fishermen. This measure is necessary to ensure adequate turtle exclusion performance of bottom-opening hard TEDs. The current use of shortened webbing flaps in the industry indicates that shrimp-loss problems are not a major concern, at least in comparison with the desirability of excluding debris.

Comment 12: Some commenters stated that the required use of top-opening hard TEDs in the Atlantic SFSTCA would result in extensive damage to gear because top-opening, hard TEDs will become buried and cause the tailbag of the net to be torn off.

Response: Reports of gear damage related to top-opening, hard TEDs have come mostly from shrimpers in the Atlantic. In some Atlantic shrimping areas, fishermen operate in very small areas and must turn their vessels tightly and frequently to work a given area. NMFS investigated the possibility that this fishing method may contribute to the reported problems. When a trawler conducts a very sharp turn, the trawls may come to a complete stop. Divers observed that top-opening TEDs, when not equipped with flotation, settled to touch the bottom when the trawl stopped. In a soft mud bottom, the TED may sink into the mud. When the trawl again takes the strain of the tow cable, there may be considerable drag and possible gear damage if the TED has become buried in sediments. The divers also observed that top-opening hard TEDs, when equipped with optional flotation, stayed well clear of the sea floor when the trawl stopped. NMFS recommends that fishermen using top-opening hard TEDs use flotation to minimize the possibility of damage to the TEDs and nets from contact with the sea floor.

Establishment of SFSTCAs

Comment 13: Numerous comments were received regarding the geographical constructs and the need for the proposed SFSTCAS, or the alternative areas recommended in the LGL Report. These concerns, such as the need for including inshore waters of the Gulf of Mexico, or excluding Louisiana due to the lack of strandings, were addressed in the proposed rule and are not repeated here (61 FR 18102, April 24, 1996, see comments 10 and 11). However, one commenter suggested that the Gulf SFSTCA should include waters out to 7 fathoms (9 m) to be consistent with Texas state regulations which prohibit nighttime shrimping out to 7 fathoms (9 m).

Response: NMFS established the 10–nm (18.5 km) distance from shore to encompass important nearshore habitat for benthic immature and subadult sea turtles, particularly Kemp's ridleys. A standard distance from shore in the SFSTCAs also allows for consistency of application across state jurisdiction. Further, NMFS believes that a distance-from-shore criterion is more easily enforced, since depth topography varies by location.

Comment 14: Several commenters were concerned that some areas of high importance of sea turtles may have been inappropriately excluded from the SFSTCAs. They urged NMFS to increase enforcement efforts, shrimp trawler observers, and stranding coverage in areas adjacent to the SFSTCAs to determine whether enhanced sea turtle protections are also necessary outside of the SFSTCAs.

Response: The proposed SFSTCAs were based on the importance of the areas for sea turtles in conjunction with the likelihood of negative interactions with heavy shrimp trawling activity. NMFS agrees that information from enforcement, observers, and strandings is useful for determining the potential level of turtle-shrimping interactions. NMFS considered all of these factors in determining the proposed SFSTCAs and does not anticipate that collection of

further information would change these decisions. Nonetheless, NMFS intends to maintain high enforcement efforts to improve the stranding monitoring network and to place observers aboard shrimp vessels, so that the incidental take of turtles in the shrimp fishery can be monitored. These actions have been requirements of the June 11, 1996, Opinion, and all subsequent Biological Opinions considering the shrimp fishery. These efforts will be directed both at the SFSTCAs and areas outside of the SFSTCAs.

Shrimp Industry Panel

Comment 15: Although not a proposed regulatory measure, NMFS solicited comments on the establishment of a shrimp industry panel and specifically on methods to identify and select shrimp industry representatives to serve on the panel that would fairly reflect the interests of the diverse sections of the shrimp trawling fleets. Comments generally supported the establishment of a shrimp industry panel. However, some commenters were concerned that such a panel would be too narrowly focused, and that all stakeholders interested in conserving sea turtle populations should be included.

Response: NMFS originally foresaw several roles for a shrimp industry panel, including review of information and recommendations regarding TED technical matters. The challenge of addressing ways to improve soft TEDs to increase turtle escapement has created a heightened need to address that issue specifically. NMFS intends to move quickly to establish a panel that would focus its efforts on improving or modifying soft TEDs. The panel's primary purposes would be to review existing information on soft TED performance, to provide recommendations and supply new information on possible solutions to identified problems, to examine testing results associated with new soft TED initiatives, and to communicate all relevant developments to the wider community of stakeholders with which individual panel members are associated.

NMFS agrees with the commenters who felt that a broader constituency than just shrimp industry representatives should be included. To ensure the transparency, and the ultimate acceptance and success, of the intensive efforts to develop effective soft TEDs, representatives from the sea turtle conservation community should also be involved. Active participation from the shrimp industry, though, will likely be critical to produce the technical ideas and solutions that are necessary to improve soft TEDs. Gear experts, shrimp industry leaders, and environmental community members will be contacted and asked to participate in the panel. Panel members should have extensive contacts to their respective communities to facilitate the passage of information to all the stakeholders and to attract the greatest number of new ideas and potential solutions for consideration.

A panel focussed entirely on soft TEDs is a narrower application than originally discussed in the proposed rule. No final decisions regarding the formation or implementation of a broader advisory panel are being made at this time, although the soft TED panel will likely provide valuable experience in the functioning of such a panel. Thus, NMFS will reserve response and consider all comments prior to any further actions on a broader shrimp industry advisory panel.

Changes to TED Requirements

Comment 16: Numerous commenters from the shrimp industry objected to any changes to the present TED requirements whatsoever, irrespective of the specific measures of the proposed rule. They criticized NMFS for making frequent changes to the existing requirements. They stated that the changes antagonized fishermen and made them suspicious of the agency's intentions and the quality of data used in management decisions.

Response: NMFS strives to avoid adverse effects on fishermen resulting from changes in regulations. NMFS also agrees that frequent changes to regulations are confusing and should be avoided. The last change to the general gear requirements was over 2 years ago, when fishermen using bottom-opening hard TEDs were required to attach flotation to the TEDs (59 FR 33447, June 29, 1994). Subsequently, temporary restrictions have been necessary in response to continued sea turtle mortality in areas of high shrimping effort (see Background). The commenters' objections to rule changes may, in part, result from frustration with the short notice provided and short duration of those temporary restrictions. NMFS believes that such temporary restrictions are better replaced by permanent measures that provide greater protection for sea turtles and greater certainty for fishermen. In the case of the present rulemaking, NMFS has attempted to inform and involve affected fishermen through extensive opportunities for public comment, informational meetings, and multiple public hearings and to improve the measures needed to protect sea turtles while minimizing the adverse impacts on shrimp fishermen. NMFS believes that the measures of this final rule will have a minimal impact on fishermen. Furthermore, delayed effective dates are being applied to the provisions in some areas to allow fishermen additional time to adapt to new requirements and to purchase any new gear as part of their regular maintenance and repair cycle and to allow additional time to develop effective soft TEDs.

NMFS will continue its efforts to minimize the effects on fishermen as it fulfills its requirements to protect and recover endangered and threatened sea turtles. To the extent possible, NMFS will avoid frequent or repeated changes to the TED requirements. TED technology, however, is constantly evolving. Fishermen frequently report problems with TEDs or offer suggestions to improve the function of TEDs, and new information has arisen on the interaction between sea turtles and shrimp trawling. NMFS is constantly evaluating these problems, ideas, and new information. If changes to the TED requirements become necessary to improve the function of TEDs either for fishermen or to ensure adequate turtle exclusion rates, NMFS will implement those changes.

At the present time, NMFS does foresee the possibility of additional changes to TED requirements. Information from observers and fishermen has identified an installation problem in which weedless-style hard TEDs are sometimes backwards to the mouth of the trawl. Testing with small turtles has shown that TEDs with this installation problem do indeed entrap turtles. In addition, the turtle exclusion problems with some configurations of bottom-opening hard TEDs that were identified in the June 1996 testing may also need to be addressed in areas outside the SFSTCAs. NMFS anticipates that additional information will be developed and a proposed rule may be published addressing these two issues. Additionally, the development of improvements or modifications to soft TEDs that effectively exclude turtles will require amendments to the regulations to implement the changes.

Changes from the Proposed Rule to the Final Rule

Reduce the Size of Try Nets that are Exempt from TED Use

The reduction in the size of try nets that are exempt from required TED use remains unchanged from the proposed rule. Specifically, only try nets with a headrope length not greater than 12 ft (3.6 m) and a footrope length not greater

than 15 ft (4.6 m) are exempt from the TED requirement. However, the effective date outside of the SFSTCAs has been extended from December 31, 1996, to December 19, 1997. NMFS believes that the longer phase-in period will provide opportunity for NMFS to provide technology outreach to shrimpers to ensure that adoption of TEDs in larger try nets is accepted more readily in those areas where shrimpers have not previously operated under this requirement.

Eliminate Existing Soft TEDs as Approved TEDs and Eliminate the Provision of the Regulations Allowing Soft TEDs to be Approved

The proposed rule called for a phase-out of the use of soft TEDs by December 31, 1996, and more immediately, a prohibition of their use in the proposed SFSTCAs. The final rule removes the approval of the Morrison TED, Parrish TED, Andrews TED, and Taylor TED, applicable December 19, 1997, except in the SFSTCAs where the use of all soft TEDs is prohibited, effective March 1, 1997. The removing of approval period for soft TEDs outside the SFSTCAs has been extended well beyond the proposed date of December 31, 1996, and will provide time for NMFS, in cooperation with gear experts, the shrimp industry, and the environmental community, to undertake initiatives to develop effective soft TEDs. Fishermen will also have greater opportunity to replace their existing gear and adapt to the use of hard grid TEDs. The final rule also addresses the need to provide immediate measures to reduce mortality in areas where they are most needed. The delayed effective date for the prohibitions on soft TEDs outside the SFSTCAs until 1 year after the publication of the final rule is also consistent with Congressional directives in the FY97 Appropriations Bill and will allow further testing and development of modified and improved soft TEDs in cooperation with the shrimp fishing industry prior to any prohibition of soft TED use.

The proposed rule would also have eliminated the authority to test and approve new soft TED designs starting in 1997. In response to comments received, this final rule maintains the authority to test and approve new soft TED designs.

Enhancing TED Effectiveness in the SFSTCAs

The prohibition on the use of soft TEDs and the reduction in the size of try nets that are exempt from TED requirements remain unchanged within the SFSTCAs. However, the proposed prohibition on bottom-opening hard grid TEDs is not implemented. Instead, two modifications to bottom-opening hard grid TED requirements are made: If the optional webbing flaps are installed, the flap must not extend beyond the posterior edge of the TED; and the angle of the deflector bars at the bottom of the TED must not exceed 45°, effective March 1, 1997. Further testing of single-grid hard TEDs has shown that these modifications provided adequate sea turtle exclusion and significantly reduced the average escape time of sea turtles (see Recent Gear Testing section).

In summary, these modifications to the bottom-opening hard TED requirements allow such TEDs to approach the level of protection to sea turtles as that attributed to top-opening hard grid TEDs, which have excellent turtle exclusion rates and fast mean TED escape times.

Provisions of the Final Rule

Based on the review of comments received during the public hearings and the comment period, new information provided in the TEWG Report, and further testing of gear types in the proposed measures (see Recent Gear Testing section), the final rule:

1. Exempts from the TED use requirements try nets with a headrope length 12 ft (3.6 m) or less and a footrope length 15 ft (4.6 m) or less, applicable December 19, 1997.

2. Removes the approval of the Morrison, Parrish, Andrews, and Taylor soft TEDs, applicable December 19, 1997.

3. Removes the applicability of the two existing TED testing protocols to soft TED testing, but continues the authority to test and approve new TEDs.

4. Establishes SFSTCAs in the northwestern Gulf of Mexico consisting of the offshore waters out to 10 nm (18.5 km) along the coasts of Louisiana and Texas from the Mississippi River South Pass (west of 89°08.5′ W. long.) to the U.S.-Mexican border, and in the Atlantic consisting of the inshore waters and offshore waters out to 10 nm (18.5 km) along the coasts of Georgia and South Carolina from the Georgia-Florida border to the North Carolina-South Carolina border.

5. Prohibits, within the SFSTCAs, the use of bottom-opening hard TEDs with a webbing flap that extends beyond the posterior edge of the TED or with an angle of the deflector bars greater than 45°, measured along the bottom-most 4 inches (10.2 cm) of each bar or, for TEDs in which the deflector bars are not attached to the bottom frame, along the imaginary lines through the bottom frame and the bottom end of each deflector bar, effective March 1, 1997.

6. Prohibits, within SFSTCAs, the use of soft TEDs, effective March 1, 1997.

7. For vessels fishing within the SFSTCAs, exempts from TED use requirements try nets with a headrope length not greater than 12 ft (3.6 m) and a footrope length not greater than 15 ft (4.6 m), effective March 1, 1997.

Classification

This action has been determined to be not significant for purposes of E.O. 12866.

The Assistant Administrator for Fisheries, NOAA, prepared an EA/RIR for this proposed rule and copies are available (see **ADDRESSES**).

When this rule was prepared, the Assistant General Counsel for Legislation and Regulation of the Department of Commerce certified to the Chief Counsel for Advocacy of the Small Business Administration as follows:

I certify that the attached proposed rule will not have a significant economic impact on a substantial number of small entities because the provisions of the proposed rule would impose only a minor economic burden on shrimp fishermen. The removal of soft TEDs from the list of approved TEDs is delayed until December 31, 1996. Since soft TEDs have a life-span of only about 1 year, shrimp fishermen using soft TEDs will not bear any additional costs, beyond normal gear replacement costs. The reduction in allowable sized of try nets that are exempt from TED requirements is also delayed until December 31, 1996. Fishermen using larger try nets will have ample time to come into compliance with this change. For many, normal gear replacement cycles will mean that no additional financial burden is assumed.

The cost of purchasing a 12–foot try net is approximately $100, or the cost of purchasing a hard TED is approximately $200. Existing large try nets may also be modified to reduce their size by the fisherman. The implementation of gear requirement changes in the SFSTCAs is proposed to occur on a more rapid schedule than the requirements outside the SFSTCA because of the more critical need to protect sea turtles and manage shrimp trawl-sea turtle interactions in those areas. The impact of this faster schedule on small businesses is expected to be small, though. The proposed SFSTCAs in the Gulf area was either included in the March 14, 1995, Shrimp Fishery Emergency Response Plan's (ERP) interim special management areas in 1995 as potentially subject to gear restrictions or were actually included in gear restrictions implemented during 1995 in response to sea turtle mortality emergencies. Other than inshore waters, the Atlantic area proposed SFSTCA also was subject to gear restrictions in 1995. Shrimp trawlers subject to any gear restrictions in 1995 will already have been required to purchase hard TEDs and reduce

the size of their try nets or install hard TEDs in their try nets. No additional burden will be imposed on those fishermen to acquire new gear. In the Gulf SFSTCA, Zones 13–16 were not subject to gear restrictions, but fishermen in that area were notified of potential additional gear requirements as specified in the ERP. Nearshore fishermen in those zones, however, reportedly were already using primarily hard TEDs, and therefore the prohibition of soft TED use should affect only a small number of fishermen. Bottom-opening hard TEDs can be converted to top-opening in approximately one hour with an estimated cost of approximately $20 of labor per net.

Accordingly, under section 603(b) of the Regulatory Flexibility Act, an initial Regulatory Flexibility Analysis was not prepared.

List of Subjects

50 CFR Part 217

Endangered and threatened species, Exports, Fish, Imports, Marine mammals, Reporting and recordkeeping requirements, Transportation.

50 CFR Part 227

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

Dated: December 13, 1996.

Rolland A. Schmitten,

Assistant Administrator for Fisheries, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR parts 217 and 227 are amended as follows:

PART 217—GENERAL PROVISIONS

1. The authority citation for part 217 continues to read as follows:

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

2. In § 217.12, the definitions for ''Atlantic Shrimp Fishery-Sea Turtle Conservation Area'' and ''Gulf Shrimp Fishery-Sea Turtle Conservation Area'' are added, in alphabetical order, to read as follows:

§ 217.12 Definitions.

* * * * *

Atlantic Shrimp Fishery-Sea Turtle Conservation Area (Atlantic SFSTCA) means the inshore and offshore waters extending to 10 nautical miles (18.5 km) offshore along the coast of the States of Georgia and South Carolina from the Georgia-Florida border (defined as the line along 30°42′45.6″ N. lat.) to the North Carolina-South Carolina border (defined as the line extending in a direction of 135°34′55″ from true north from the North Carolina-South Carolina land boundary, as marked by the border station on Bird Island at 33° 51′07.9″ N. lat., 078°32′32.6″ W. long.).

* * * * *

Gulf Shrimp Fishery-Sea Turtle Conservation Area (Gulf SFSTCA) means the offshore waters extending to 10 nautical miles (18.5 km) offshore along the coast of the States of Texas and Louisiana from the South Pass of the Mississippi River (west of 89°32′32.6″08.5′ W. long.) to the U.S.-Mexican border.

* * * * *

PART 227—THREATENED FISH AND WILDLIFE

3. The authority citation for part 227 continues to read as follows:

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

4. In § 227.72, paragraphs (e)(2)(ii)(B)(*1*), (e)(4)(i)(C), (e)(4)(iii) introductory text, (e)(4)(iv)(C), and (e)(5)(i) are revised to read as follows:

§ 227.72 Exceptions to prohibitions.

* * * * *

(e) * * *

(2) * * *

(ii) * * *

(B) * * *

(*1*) (*i*) For any shrimp trawler fishing in the Gulf SFSTCA or the Atlantic SFSTCA, 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 either 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.

(*ii*) Prior to December 19, 1997, in areas other than the Gulf SFSTCA or the Atlantic SFSTCA, a single test net (try net) with a headrope length of 20 ft (6.1 m) or less, if it is either 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.

(*iii*) Applicable after December 19, 1997, 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 either 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.

* * * * *

(4) * * *

(i) * * *

(C) *Angle of deflector bars*. (*1*) Except as provided in paragraph (e)(4)(i)(C)(*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.

(*2*) 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:

(*i*) If the deflector bars that run from top to bottom are attached to the bottom frame of the TED, 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);

(*ii*) If the deflector bars that run from top to bottom are not attached to the bottom frame of the TED, the angle of the imaginary lines connecting the bottom frame of the TED to the bottom end of each deflector bar which runs from top to bottom must not exceed 45° (Figure 15).

* * * * *

(iii) *Soft TEDs*. Soft TEDs are TEDs with deflector panels made from polypropylene or polyethylene netting. For any shrimp trawler fishing in the Gulf SFSTCA and the Atlantic SFSTCA, soft TEDs are not approved TEDs. Prior to December 19, 1997, in areas other than the Gulf SFSTCA and Atlantic SFSTCA, the following soft TEDs are approved TEDs:

* * * * *

(iv) * * *

(C) *Webbing flap*. A webbing flap may be used to cover the escape opening if: 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; and it does not extend more than 24 inches (61.0 cm) beyond the posterior edge of the grid, except for trawlers fishing in the Gulf SFSTCA or Atlantic SFSTCA with a hard TED with the position of the escape opening at the bottom of the net when the net is in its deployed position, in which case the webbing flap must not extend beyond the posterior edge of the grid.

* * * * *

(5)(i) *Revision of generic design criteria, and approval of TEDs, of allowable modifications of hard TEDs, and of special hard TEDs*. The Assistant

Administrator may revise the generic design criteria for hard TEDs set forth in paragraph (e)(4)(i) of this section, may approve special hard TEDs in addition to those listed in paragraph (e)(4)(ii) of this section, may approve allowable modifications to hard TEDs in addition to those authorized in paragraph (e)(4)(iv) of this section, or may approve other TEDs, by regulatory amendment, if, according to a NMFS-approved scientific protocol, the TED demonstrates a sea turtle exclusion rate of 97 percent or greater (or an equivalent exclusion rate). Two such protocols have been published by NMFS (52 FR 24262, June 29, 1987; and 55 FR 41092, October 9, 1990) and will be used only for testing relating to hard TED designs. Testing under any protocol must be conducted under the supervision of the Assistant Administrator, and shall be subject to all such conditions and restrictions as the Assistant Administrator deems appropriate. Any person wishing to participate in such testing should contact the Director, Southeast Fisheries Science Center, NMFS.

* * * * *

5. Figures 14a, 14b, and 15 to part 227 are added to read as follows:

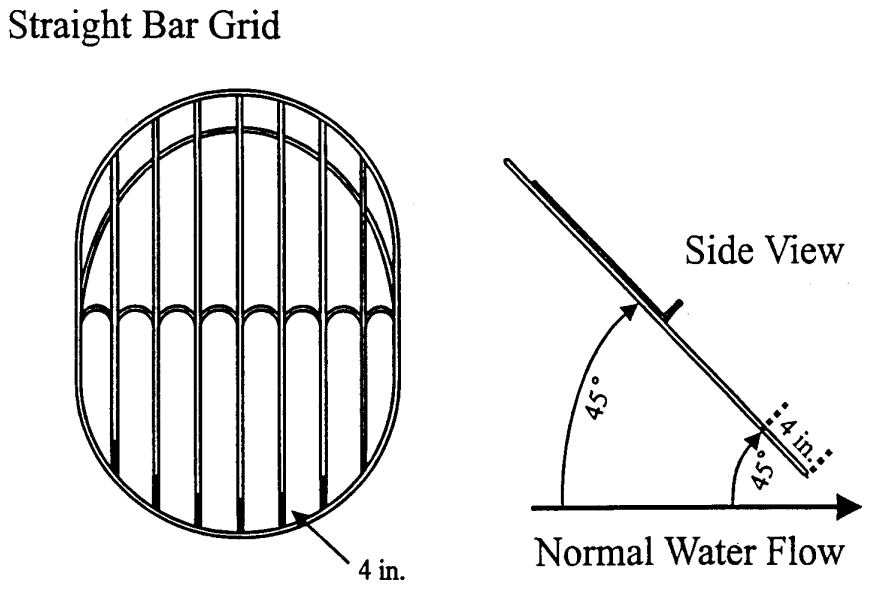

Figure 14a to part 227
Maximum Angle of Deflector Bars with Straight Bars Attached to the Bottom of the Frame

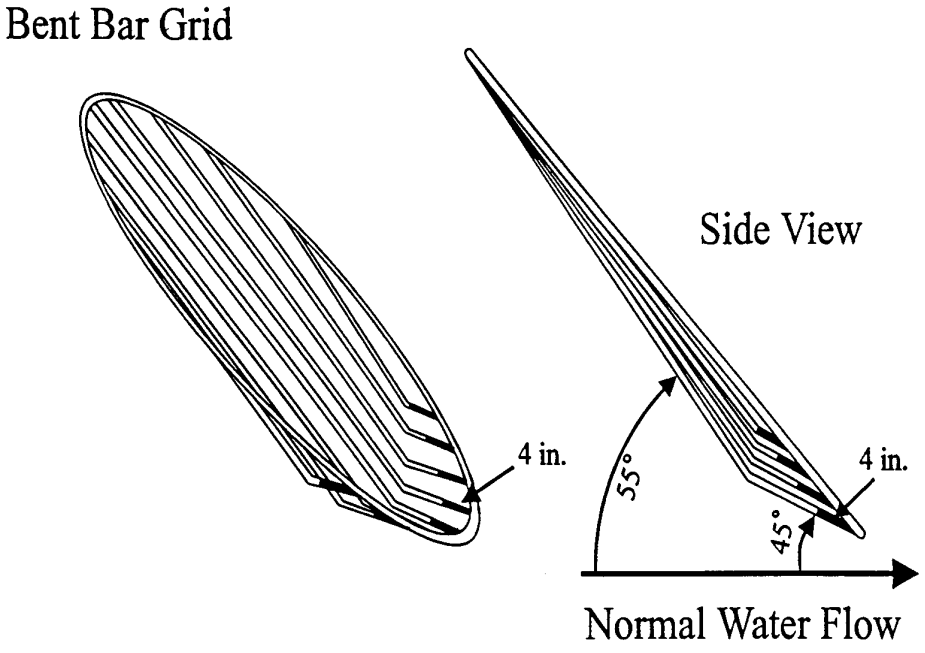

Figure 14b to part 227
Maximum Angle of Deflector Bars with Bent Bars Attached to the Bottom of the Frame

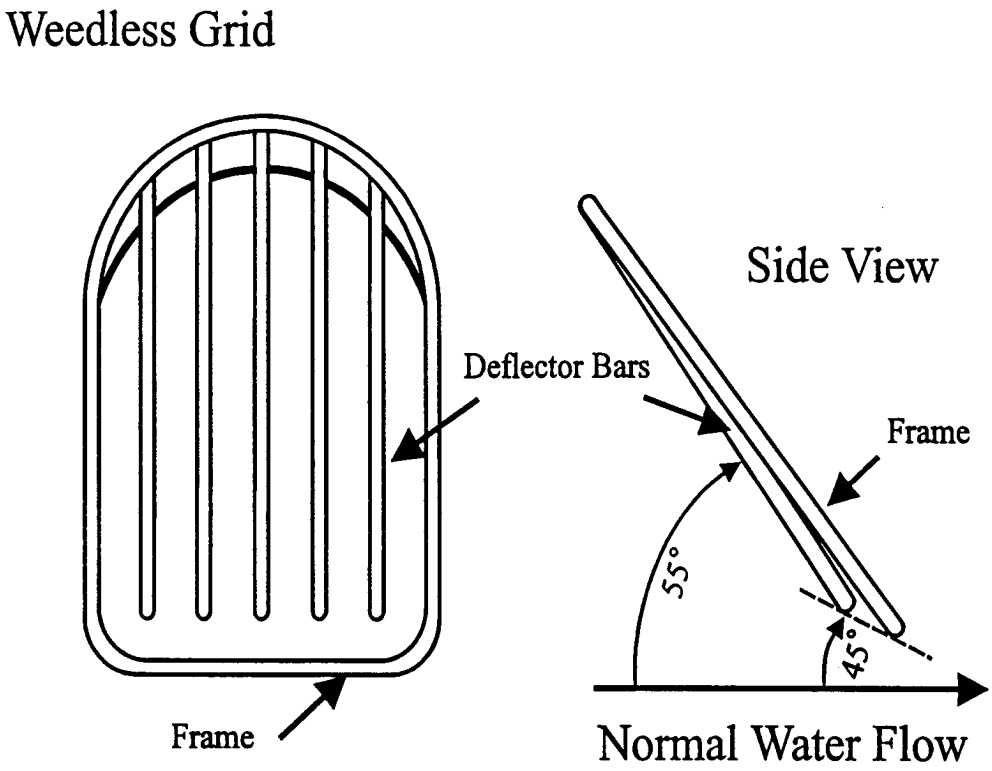

Figure 15 to part 227
Maximum Angle of Deflector Bars with Bars Unattached to the Bottom of the Frame

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