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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223

[Docket No. 161109999-6999-01]

RIN 0648-BG45

Sea Turtle Conservation; Shrimp Trawling Requirements

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

ACTION: Proposed rule; request for comments; notice of public hearings.

SUMMARY: We are proposing to withdraw the alternative tow time restriction and require all skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) rigged for fishing—with the exception of vessels participating in the Biscayne Bay wing net fishery prosecuted in Miami-Dade County, Florida—to use turtle excluder devices (TEDs) designed to exclude small turtles in their nets. The intent of this proposed rule is to reduce incidental bycatch and mortality of sea turtles in the southeastern U.S. shrimp fisheries, and to aid in the protection and recovery of listed sea turtle populations. We also are proposing to amend the definition of tow times to better clarify the intent and purpose of tow times to reduce sea turtle mortality, and to refine additional portions of the TED requirements to avoid potential confusion.

DATES: Written comments (see **ADDRESSES**) will be accepted through [*insert date 60 days after date of publication in the FEDERAL REGISTER*]. Public hearings on the proposed rule will be held in January 2017. See **SUPPLEMENTARY INFORMATION** for meeting dates, times, and locations.

ADDRESSES: You may submit comments on this proposed rule, identified by 0648-BG45, by any of the following methods:

- *Federal e-Rulemaking Portal*: Go to [www.regulations.gov/#/docketDetail;D=\[NOAA-NMFS-2016-0151\]](http://www.regulations.gov/#/docketDetail;D=[NOAA-NMFS-2016-0151]), click the “Comment Now!” icon, complete the required fields, and enter or attach your comments

- Mail: Michael Barnette, Southeast Regional Office, NMFS, 263 13th Avenue South, St. Petersburg, FL 33701.

- Fax: 727-824-5309; Attention: Michael Barnette.

Instructions: NMFS may not consider comments if they are sent by any other method, to any other address or individual, or received after the comment period ends. All comments received are a part of the public record and NMFS will generally post for public viewing on www.regulations.gov without change. All personal identifying information (for example, name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter N/A in the required fields, if you wish to remain anonymous). You may submit attachments to electronic comments in Microsoft Word, Excel, or Adobe PDF file formats only.

FOR FURTHER INFORMATION CONTACT: Michael Barnette, 727-551-5794.

SUPPLEMENTARY INFORMATION:

Background

All sea turtles in U.S. waters are listed as either endangered or threatened under the Endangered Species Act of 1973 (ESA). In the Atlantic Ocean and Gulf of Mexico, the Kemp’s ridley (*Lepidochelys kempii*), leatherback (*Dermochelys coriacea*), and hawksbill (*Eretmochelys imbricata*) turtles are listed as endangered. The loggerhead (*Caretta caretta*; Northwest Atlantic Ocean distinct population segment) and green (*Chelonia mydas*; North Atlantic and South Atlantic Ocean distinct population segments) turtles are listed as threatened.

Sea turtles are incidentally taken, and some are killed, as a result of numerous activities including fishery-related trawling activities in the Gulf of Mexico and along the

Atlantic seaboard. Under the ESA and its implementing regulations, taking (harassing, injuring or killing) sea turtles is prohibited, except as identified in 50 CFR 223.206 in compliance with the terms and conditions of a biological opinion issued under section 7 of the ESA, or in accordance with an incidental take permit issued under section 10 of the ESA. Incidental takes of threatened sea turtles during shrimp trawling are exempt from the taking prohibition of section 9 of the ESA so long as the conservation measures specified in the sea turtle conservation regulations (50 CFR 223.206) are followed. The same conservation measures also apply to endangered sea turtles (50 CFR 224.104).

The regulations require most shrimp trawlers operating in the southeastern United States to have an approved TED installed in each net that is rigged for fishing, to allow sea turtles to escape. Approved TED types include single-grid hard TEDs and hooped hard TEDs conforming to a generic description, and the Parker soft TED (see 50 CFR 223.207). However, skimmer trawls, pusher-head trawls, and vessels using wing nets (butterfly trawls) currently may employ alternative tow time restrictions in lieu of installing TEDs, under 50 CFR 223.206(d)(2)(ii)(A). The alternative tow time restrictions currently limit tow times to 55 minutes from April 1 through October 31, and 75 minutes from November 1 through March 31.

TEDs incorporate an escape opening, usually covered by a webbing flap, which allows sea turtles to escape from trawl nets. A TED design must be shown to be 97 percent effective in excluding sea turtles during testing based upon specific testing protocols (50 CFR 223.207(e)(1)) to meet standards for approval. Most approved hard TEDs are described in the regulations (50 CFR 223.207(a)) according to generic criteria based upon certain parameters of TED design, configuration, and installation, including minimum height and width dimensions of the TED opening through which the turtles escape.

We previously examined the incidental bycatch and mortality of sea turtles in the shrimp fisheries in 2011-2012, stemming from concerns related to elevated sea turtle

strandings in the northern Gulf of Mexico. On June 24, 2011 (76 FR 37050), we published a notice of intent to prepare an EIS and conduct scoping meetings on potential measures to reduce sea turtle bycatch in the shrimp fisheries. On May 10, 2012 (77 FR 27411), we published a proposed rule that, if implemented, would require all skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) to use TEDs in their nets. We also prepared a draft environmental impact statement (DEIS), which included a description of the purpose and need for evaluating the proposed action and other potential management alternatives, the scientific methodology and data used in the analyses, background information on the physical, biological, human, and administrative environments, and a description of the effects of the proposed action and other potential management alternatives on the aforementioned environments. A notice of its availability was published on May 18, 2012 (77 FR 29636). At the time the 2012 DEIS was prepared, information on the effects of the skimmer trawl fisheries on sea turtle populations was extremely limited. New information gained after the preparation of the 2012 DEIS indicated that a significant number of sea turtles observed interacting with the skimmer trawl fisheries (*i.e.*, those found in shallow (< 60 feet), state waters) had a body depth that would allow them to pass between the required maximum 4-inch (10.2 centimeter (cm)) bar spacing of a standard, approved TED and proceed into the back of the net (*i.e.*, they would not escape the trawl net). Therefore, the conservation benefit of expanding the TED requirement to skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) was much less than originally anticipated. As a result, we determined that a final rule to withdraw the alternative tow time restriction and require all skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) to use TEDs was not warranted (February 7, 2013; 78 FR 9024).

Following the withdrawal of the proposed rule, we initiated additional TED testing, evaluating both small sea turtle exclusion and shrimp retention within the skimmer trawl fisheries. This testing has produced several TED configurations that all

use a TED grid with 3-inch (7.6 cm) bar spacing (*i.e.*, less than the current 4-inch bar spacing maximum) and escape-opening flap specifications that would allow small turtles to effectively escape the trawl net, which could be employed by trawl vessels in areas where these small turtles occur.

Additionally, anecdotal information, law enforcement data, and past public comment during scoping for the 2012 DEIS indicate that the alternative tow time requirements are exceeded by the skimmer trawl fleets, though to what extent is unclear. Tow times are inherently difficult to enforce widely due to the time required to monitor a given vessel, as well as the ability to do so covertly to observe unbiased fishing operations. Furthermore, anecdotal information indicates that skimmer trawl vessels have increased the size and amount of gear they use to fish, allowing them to fish in deeper water. In some cases, vessels are rigged with both skimmer trawl frames and outriggers for use with conventional otter trawl nets. As a result of these larger skimmer trawl nets, there is a possibility that a sea turtle could be captured within the mouth of the net and not be visible during a cursory cod end inspection, a scenario that is compounded by the fact that many vessels fish at night. For these reasons, and because of the increased abundance of sea turtles in the northern Gulf of Mexico, particularly juvenile Kemp's ridley sea turtles, we are re-evaluating the efficacy of sea turtle conservation requirements associated with the skimmer trawl fisheries, and analyzing the effectiveness of current TED requirements in the otter trawl fisheries.

On March 15, 2016 (81 FR 13772), we published a notice of intent to prepare an EIS and conducted five scoping meetings in April 2016. Information and public comment gathered during that process was incorporated into this DEIS, and a notice of its availability was published elsewhere in today's issue of the **Federal Register**. The analysis included in this DEIS demonstrates that withdrawing the alternative tow time restriction and requiring all skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) rigged for fishing—with the exception of vessels participating in the Biscayne

Bay wing net fishery prosecuted in Miami-Dade County, Florida—to use TEDs in their nets would reduce incidental bycatch and mortality of sea turtles in the southeastern U.S. shrimp fisheries and, therefore, may be a necessary and advisable action to conserve threatened and endangered sea turtle species.

The Biscayne Bay wing net fishery is not required to use the new TEDs included in this rulemaking since the fishery operates by sight fishing at the surface close to the vessel using small, light monofilament nets during the winter months. We anticipate the incidental capture of sea turtles would be a rare event based on the time, location, and operational parameters of the fishery. If a sea turtle was incidentally captured, it would be immediately obvious to the operator, and could be quickly released.

Skimmer Trawls, Pusher-Head Trawls, and Wing Nets

Developed in the early 1980s, the skimmer trawl was intended for use in some areas primarily to catch white shrimp, which have the ability to jump over the headrope of standard otter trawls while being towed in shallow water. The skimmer net frame allows the net to be elevated above the water while the net is fishing, thus preventing shrimp from escaping over the top. Owing to increased shrimp catch rates, less debris and/or fish and other bycatch, and lower fuel consumption than otter trawlers, the use of skimmer nets quickly spread throughout Louisiana, Mississippi, and Alabama. The basic components of a skimmer trawl include a frame, the net, heavy weights, skids or “shoes,” and tickler chains. The net frame is usually constructed of steel or aluminum pipe or tubing and is either L-shaped (with an additional stiff leg) or a trapezoid design. When net frames are deployed, they are aligned perpendicularly to the vessel and cocked or tilted forward and slightly upward. This position allows the net to fish better and reduces the chance of the leading edge of the skid digging into the bottom and subsequently damaging the gear. The frames are maintained in this position by two or more stays or cables to the bow. The outer leg of the frame is held in position with a “stiff leg” to the horizontal pipe and determines the maximum depth at which each net is capable of

working. The skid, or “shoe,” is attached to the bottom of the outer leg, which allows the frame to ride along the bottom, rising and falling with the bottom contour. The bottom of the gear includes tickler chains and lead lines. The skimmer trawl is the most popular trawl type after the otter trawl, and is widely used in Louisiana waters.

Vietnamese fishers who moved into Louisiana in the early 1980s introduced the pusher-head trawl, also known as the “xipe” or chopstick net. The pusher-head trawl net is attached to a rigid or flexible frame similar to the wing net; however, the frame mounted on the bow of the boat is attached to a pair of skids and fished by pushing the net along the bottom.

Wing nets, also known as butterfly trawls or “paupiers”, were introduced in the 1950s and used on stationary platforms and on shrimp boats either under power or while anchored. A wing net consists of a square metal frame which forms the mouth of the net. Webbing is attached to the frame and tapers back to a cod end. The net can be fished from a stationary platform or a pair of nets can be attached to either side of a vessel. The vessel is then anchored in tidal current or the nets are “pushed” through the water by the vessel. The contents of the wing net, as well as the contents of skimmer and pusher-head trawls, can be picked up and dumped without raising the entire net out of the water, which is necessary with an otter trawl.

Pusher-head trawls and wing nets (butterfly trawls) are both allowable gear types in several Gulf of Mexico coastal states, however, their use is largely overshadowed by skimmer trawls in shallow, coastal waters. In the DEIS, we estimate approximately 93 percent of non-otter trawl effort in the shrimp fisheries is conducted by skimmer trawls.

Sea Turtle Bycatch in Skimmer Trawls, Pusher-Head Trawls, and Wing Nets

We initiated observer effort on Gulf of Mexico skimmer trawl vessels in 2012. A total of 39 sea turtles were captured during observed trips consisting of 2,699.23 tow hours from 2012 through 2015. Additionally, in 2015 the North Carolina Division of Marine Fisheries observed 238 tows over 62 days, which is 6.21 percent of the total

annual skimmer trawl fishing effort. They observed four sea turtle captures (Brown 2016). The incidental capture of sea turtles in skimmer trawls has been documented in North Carolina during other studies as well (Coale *et al*, 1994; Price and Gearhart 2011).

In the DEIS, we calculated sea turtle catch per unit effort rates based on observed effort in the skimmer trawl fisheries. The catch rate was multiplied by total average effort (*i.e.*, 539,394 effort hours in the Gulf of Mexico non-otter trawl fisheries and 4,356 effort hours in the North Carolina skimmer trawl fishery) to determine total sea turtle take in these fisheries. The analysis resulted in a total anticipated take of 7,928 captured sea turtles in the combined skimmer trawl, pusher-head trawl, and wing net fisheries.

We then estimated sea turtle mortalities as a result of these fisheries based on observed mortality rates and taking into consideration the effects of post-interaction mortality on captured and released sea turtles. That analysis concluded a TED requirement for all skimmer trawl, pusher-head trawl, and wing net vessels could reduce annual sea turtle mortalities from those currently occurring under the status quo by 789-1,543 in the near term and 1,730-2,500 after TED compliance rises to final anticipated levels. The methodology for this analysis is described in detailed in the DEIS. Therefore, we preliminarily determined that the measures proposed here are necessary and advisable to conserve threatened and endangered sea turtle species. We have further preliminarily determined that the measures proposed here are necessary and appropriate to enforce the requirements of the ESA.

We anticipate a six-month delayed effective date upon publication of a final rule in the **Federal Register**. Due to the number of TEDs required for the affected vessels and the time required to construct these TEDs, our analysis indicates additional effort may be needed to construct the new TEDs. One way to address this concern is a phased-in approach for implementing the new TED requirements that takes these issues into account. Thus, we are specifically soliciting public comment on how to best structure a

phased implementation, so as to achieve the desired conservation benefit promptly, while providing adequate time for the devices to be constructed and installed.

Potential scenarios include basing the approach on landings, where vessels with the highest landings would be the first vessels required to install the new TEDs, and vessels with lower landings would be required to install the new TEDs later in time. Vessels could be placed in categories based on their recorded landings, with each category being addressed in multiple phases over time. The intention would be to first implement the requirement where it would achieve the greatest conservation benefit for listed sea turtles. Based on the assumption that higher landings would be associated with higher levels of effort and, therefore, higher numbers of sea turtle interactions, those vessels should be the first required to install the devices. Another approach could be to phase the TED requirement based on vessel size, where the largest vessels would be the first vessels required to install the devices. Similar to the landings based approach, this would view vessel size as a proxy for effort and the associated sea turtle interactions. One of the challenges with any approach will be the ability to definitively identify all vessels subject to the requirement and provide adequate notice to the owners and operators as to precisely when the new devices must be installed.

Additional Revisions to the TED Requirements

We are proposing to amend the TED requirements to clarify that tow times are mandatory for vessels not required to use TEDs, as well as to clarify the tow time definition. The requirements currently define a tow time for trawls that are not attached to an otter door as the time the cod end enters the water until it is removed from the water. Skimmer trawls can still fish while the cod end is raised, and there is concern that turtles could be entangled or otherwise entrained in other portions of the net that would not be visible by raising just the cod end. As such, this definition may not properly address the need to ensure sea turtles are not drowned in trawl nets while fishing without TEDs. Therefore, we are proposing to revise the tow time definition to specify that the entire net

(*i.e.*, including the net frame) be removed from the water at the end of a tow when not using TEDs in the net. We also are amending the name of various TED escape openings and webbing flaps to avoid confusion about where these openings and flaps may be used. For example, we propose to amend the “71-inch offshore opening” to just the “71-inch opening” as this TED escape opening can also be used in inshore waters.

Classification

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

We prepared an initial regulatory flexibility analysis (IRFA), as required by section 603 of the Regulatory Flexibility Act (RFA), for this proposed rule. The IRFA describes the economic effects this proposed rule, if adopted, would have on small entities. A description of this action, why it is being considered, the objectives of, and legal basis for this proposed rule are contained at the beginning of this section in the preamble and in the **SUMMARY** section of the preamble. A copy of the full analysis is available from us (see **ADDRESSES**). A summary of the IRFA follows.

The ESA provides the statutory basis for this proposed rule. This proposed rule would not establish any new reporting, record-keeping, or other compliance requirements beyond the requirement to use TEDs when using skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls). TEDs are typically installed by the net manufacturer, so no special skills would be expected to be required of fishers for TED installation. Some training would be necessary for the maintenance and routine use of TEDs by fishers who have not historically had to use these devices. However, TEDs have been required for vessels harvesting shrimp with otter trawls for many years. A majority of the vessels directly regulated by this proposed rule also used otter trawls between 2011 and 2014 and, thus, are expected to know how to properly maintain and use TEDs. Further, the skills required for properly maintaining and using TEDs in skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) is thought to be consistent with the skillset and

capabilities of commercial shrimp fishers in general. As a result, special professional skills training would not be expected to be necessary.

This proposed rule is expected to directly regulate vessels that use skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) in the southeastern U.S. shrimp fisheries (North Carolina through Texas), with the exception of vessels that use only wing nets (butterfly trawls) in Biscayne Bay in Miami-Dade County, Florida. An estimated 5,837 vessels have been identified as using this gear (5,660 vessels in the Gulf of Mexico and 177 vessels in the South Atlantic). Although some of the directly regulated shrimp vessels are thought to be owned by businesses with the same or substantively the same individual owners, and thus would be considered affiliated, ownership data for these vessels is incomplete. It is not currently feasible to accurately determine whether businesses that own these vessels are, in fact, affiliated. As a result, although it will result in an overestimate of the actual number of businesses directly regulated by this proposed rule, for the purposes of this analysis, it is assumed that each vessel is independently owned by a single business. We have not identified any other entities that might be directly regulated by this proposed rule. Therefore, this proposed rule would be expected to directly regulate 5,837 businesses.

The average annual gross revenue (2014 dollars) over the period 2011-2014 for vessels that harvested shrimp using skimmer trawls, pusher-head trawls, or wing nets (butterfly trawls) was approximately \$31,861 for vessels in the Gulf of Mexico (5,660 vessels) and \$37,250 for vessels in the South Atlantic (177 vessels). The largest average annual gross revenues earned by a single business over this period were approximately \$1.85 million.

On December 29, 2015, NMFS issued a final rule establishing a small business size standard of \$11 million in annual gross receipts (revenue) for all businesses primarily engaged in the commercial fishing industry (NAICS code 114111) for RFA compliance purposes only (80 FR 81194; December 29, 2015). The \$11 million standard

became effective on July 1, 2016, and is to be used in place of the prior Small Business Administration standards of \$20.5 million, \$5.5 million, and \$7.5 million for the finfish (NAICS 114111), shellfish (NAICS 114112), and other marine fishing (NAICS 114119) sectors of the U.S. commercial fishing industry in all our rules subject to the RFA after July 1, 2016. Id. at 81194. In addition to this gross revenue standard, a business primarily involved in commercial fishing is classified as a small business if it is independently owned and operated, and is not dominant in its field of operations (including its affiliates). Based on the information above, all businesses directly regulated by this proposed rule are determined to be small businesses for the purpose of this analysis.

This proposed rule would require all commercial fishing vessels using skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) in the Southeastern U.S. shrimp fishery (North Carolina through Texas), with the exception of vessels that use only wing nets (butterfly trawls) in Biscayne Bay in Miami-Dade County, Florida, to use TEDs designed to exclude small sea turtles when shrimping. Although these TEDs, as designed, successfully result in the reduced bycatch of small sea turtles, they also result in shrimp loss and, thus, reduced shrimp harvest per tow. Although it may be theoretically possible to compensate for this reduction in harvest with additional effort (more tows or trips), increasing effort will also increase operating costs. The difference between shrimp prices and fuel prices is directly related to profitability (i.e., as the difference increases, profits increase). With the exception of 2014, this difference has been very small in the past several years and thus vessels are already operating on small economic margins. Increasing effort is therefore likely to be economically risky, particularly for vessels that only or primarily harvest after the seasonal openings because catch per unit effort steadily declines over time and the additional revenue from each tow or trip steadily declines as well. Further, if additional effort was cost-effective or profitable, this effort would already be occurring and part of baseline fishing behavior.

Therefore, vessels are not expected to compensate for lost shrimp and the associated gross revenues by increasing effort.

As a result, vessels affected by this proposed rule would be expected to experience adverse economic effects from two sources: reduced shrimp revenue and increased gear costs associated with the purchase, installation, maintenance, and replacement of newly required TEDs. Revenue loss from reduced shrimp harvest would be expected to be recurrent (yearly), barring changes in fishing practices, and the increased gear costs would recur periodically based on the loss, maintenance, and replacement cycles of TEDs (under normal use and proper maintenance, a TED would be expected to last at least three years).

In this analysis, the average shrimp loss is assumed to be 6.21 percent on average (estimated range of 3.07 percent-10.61 percent), the estimated cost per TED is \$325 for small vessels (vessels less than 60 feet) and \$550 for large vessels (vessels 60 feet or longer), and vessels are assumed to purchase/carry enough TEDs for the nets towed plus one spare set. Therefore, the actual effects of this proposed rule on individual vessels will vary based on individual performance (*i.e.*, shrimp loss may be higher or lower than the average; because these fishers have not traditionally had to use TEDs, and initial shrimp loss may be higher and persist until greater familiarity with the gear is acquired) and gear purchase decisions (how many TEDs are purchased/carried).

Additionally, in this analysis, neither the ex-vessel price per pound of domestically harvested shrimp nor the expected cost per TED is modeled to change in response to supply and demand conditions. Specifically, the estimated decrease in the harvest of domestic shrimp (as a result of increased shrimp loss due to this proposed rule) is not modeled to result in an increase in the ex-vessel price of domestic shrimp, nor has the projected increase in the demand for TEDs been modeled to result in an increase in the average price of a TED. The assumed lack of change in shrimp ex-vessel prices is likely more realistic than the assumed constant price of a TED because imported shrimp

dominate the U.S. market and available evidence suggests the demand for shrimp is highly elastic. Upward price pressure on TEDs will be affected by the number of available suppliers (there are currently six), their capacity to meet production demand (each can currently produce 20 TEDs per week), the timeframe for compliance, and the total number of TEDs needed (estimated to be 23,266 in order to fully outfit all of the vessels directly regulated by this proposed rule). The total number of TEDs needed will be affected by vessel purchase decisions (*i.e.*, how many spare TEDs vessels choose to carry), and the number of vessels that can successfully remain in operation in the face of the higher operating costs and reduced revenue. Although not expected, if the ex-vessel price of shrimp increases as a result of reduced supply, the effects provided in this analysis will be overstated. Conversely, if the price of a TED increases, then the adverse economic effects associated with the costs of purchasing TEDs will be understated.

Because the increased gear costs associated with purchasing TEDs would be periodic, whereas the shrimp loss would be ongoing and recurrent, the following analysis only presents first-year results (*i.e.*, results that include both TED purchase costs and shrimp revenue reduction). The adverse effects in subsequent years will be less than those in the first year and would be expected to vary with fishing adaptations (fishers may become more skilled in and familiar with the operation and use of TEDs, thereby reducing shrimp loss), and TED replacement schedules (both planned and unplanned).

All of the monetary effects provided in this analysis are in 2014 dollars. Over all of the businesses expected to be affected (5,837 vessels), this proposed rule would be expected to result in a reduction in gross revenue of approximately \$6.2 million and TED costs of approximately \$7.5 million, thereby resulting in a total adverse effect of approximately \$13.7 million in the first year. The average adverse effects per vessel would be \$1,062, \$1,285, and \$2,347 with respect to lost gross revenue, TED costs, and the total adverse effect, respectively. These effects would not be expected to be uniform across Gulf of Mexico and South Atlantic vessels. Gulf of Mexico vessels would be

expected to experience average adverse effects of \$1,085, \$1,298, and \$2,383 with respect to lost gross revenue, TED costs, and the total adverse effect, respectively. The comparable values for South Atlantic vessels would be \$146, \$1,219, and \$1,365.

In the Gulf of Mexico, vessels were placed into one of six (6) categories: average Federally-permitted vessel (Federal Gulf of Mexico), Q5, Q4, Q3, Q2, and Q1. The average annual gross revenue ranges for these categories are as follows: greater than or equal to \$255,000 (Federal Gulf of Mexico), less than \$255,000 but greater than or equal to \$119,000 (Q5), less than \$119,000 but greater than or equal to \$52,000 (Q4), less than \$52,000 but greater than or equal to \$29,000 (Q3), less than \$29,000 but greater than or equal to \$17,000 (Q2), and less than \$17,000 (Q1). In the South Atlantic, vessels were placed into nine (9) categories: rock shrimp (RSLA), primary penaeid (SPA Primary), secondary penaeid (SPA Secondary), average Federally-permitted South Atlantic penaeid vessel (AS), Q5, Q4, Q3, Q2, and Q1. A vessel was placed in the RSLA category if 50 percent or more of its gross revenue came from shrimp and its average annual gross revenue was greater than or equal to \$456,000. A vessel was placed in the AS category if 50 percent or more of its gross revenue came from shrimp and its average annual gross revenue was less than \$456,000 but greater than or equal to \$216,000. A vessel was placed in the SPA Primary category if 50 percent or more of its gross revenue came from shrimp and its average annual gross revenue was less than \$216,000 but greater than or equal to \$119,000. Finally, a vessel was placed in the SPA Secondary category if less than 50 percent of its gross revenue came from shrimp and its average annual gross revenue was greater than or equal to \$119,000. The ranges are the same as in the Gulf of Mexico for the Q5, Q4, Q3, Q2, and Q1 categories.

It should not be inferred that every vessel in a particular category has a particular permit associated with the category name, as that is not always the case. For the purpose of this analysis, vessels in the Q1, Q2, and Q3 categories are considered part-time vessels (*i.e.*, vessels that are only engaged in commercial fishing part-time) in both the Gulf of

Mexico and the South Atlantic, while vessels in each of the other categories are considered full-time vessels.

For Gulf of Mexico vessels, the number of vessels expected to be directly regulated by this proposed rule and their average annual gross fishing revenue from 2011 through 2014 are 3,386 vessels and \$4,524 for Q1 vessels, followed by 534 vessels and \$22,773 (Q2), 655 vessels and \$39,130 (Q3), 781 vessels and \$77,698 (Q4), 232 vessels and \$160,932 (Q5), and 72 vessels and \$405,664 (Federal Gulf of Mexico). The expected average adverse effect (reduced shrimp revenue and TED cost) of the proposed rule in the first year for these vessels is \$1,510, \$2,200, \$2,813, \$4,568, \$6,467, and \$3,303 for vessels in the Q1, Q2, Q3, Q4, Q5, and Federal Gulf of Mexico categories, respectively.

Although the average adverse effects of the proposed rule could be compared to the average gross revenue to generate an estimate of the average relative (percent) effect of the proposed rule by category, this “average to average” approach (average adverse effect/average gross revenue for each category) would provide a distorted perspective of the actual expected effects of this proposed rule at the vessel level. For example, using this approach (“average to average”) for category Q1, the average estimated effect of the cost of the proposed rule would be approximately 33.4 percent ($\$1,510/\$4,524$; the projected average adverse effect per vessel of this proposed rule would be 33.4 percent of average annual gross revenue). Although this outcome would not likely be considered insignificant, examination of the adverse effect by vessel (adverse effect/average gross revenue for that vessel), then averaged across all vessels, provides a much clearer picture of the expected economic effect of this proposed rule. Using this approach, the relative adverse effect of this proposed rule, as a percentage of average annual gross revenue, increases to 199.4 percent for vessels in the Q1 category. This result demonstrates that most of these vessels generate minimal fishing revenue year-to-year, and the costs of the TEDs alone are likely to be financially unbearable even before factoring in the loss of shrimp revenue.

Applying this approach (analysis at the vessel level, then averaging across all vessels) to all revenue categories for Gulf of Mexico vessels, the relative adverse effect as a percentage of gross revenue would be expected to be 199.4 percent for Q1 vessels, 9.8 percent (Q2), 7.3 percent (Q3), 6.0 percent (Q4), 4.2 percent (Q5), and 1.0 percent (Federal Gulf of Mexico). These results demonstrate that, although the expected effects in absolute monetary terms are greater for vessels in the Q4, Q5, and Federal Gulf of Mexico categories, (*i.e.*, vessels that generate the highest average annual gross revenues and are considered full-time vessels), the relative effect of this proposed rule would be greater on vessels in the Q1, Q2, and Q3 categories (*i.e.*, part-time vessels that have the lowest average annual gross revenues).

For South Atlantic vessels, the number of vessels expected to be directly affected by this proposed rule and their average gross revenue for 2011-2014 are 123 vessels and \$5,350 for Q1 vessels, followed by 19 vessels and \$22,797 (Q2), 17 vessels and \$39,329 (Q3), 13 vessels and \$717,843 (Q4), 3 vessels and \$835,270 (RSLA), and 1 vessel for each of the SPA Secondary and AS categories. Because the expected number of entities affected by the proposed rule in the SPA Secondary and AS categories is so small, neither baseline economic information nor expected economic effects can be reported for them due to confidentiality restrictions. The expected average adverse effect (reduced shrimp revenue and TED cost) of this proposed rule in the first year is \$1,290, \$1,378, \$1,667, \$1,627, \$1,573 for vessels in the Q1, Q2, Q3, Q4 and RSLA categories, respectively. Using the same vessel-level analytical approach discussed in the previous paragraph and applied to Gulf of Mexico vessels, the relative adverse effect as a percentage of gross revenue for South Atlantic vessels would be expected to be 96.5 percent for Q1 vessels, 6.2 percent (Q2), 4.4 percent (Q3), 2.4 percent (Q4), and 0.2 percent (RSLA). The expected effects in absolute monetary terms for the South Atlantic vessels do not follow as markedly the same pattern as do those for Gulf of Mexico vessels. Full-time vessels in the South Atlantic would generally be expected to experience greater average adverse

effects than part-time vessels, but range of the difference is only a couple hundred dollars for South Atlantic vessels and not thousands of dollars as expected in the Gulf of Mexico, and the relative effects are not expected to be as great. However, as in the Gulf of Mexico, the relative effects on the part-time vessels in the South Atlantic also exceed that of full-time vessels. In addition, similar to the results for Gulf of Mexico vessels, the effects on the South Atlantic Q1 vessels may be so great as to render continued operation as a commercial fishing vessel economically infeasible.

In spite of the results presented above, this analysis neither assumes nor concludes that any specific individual or total number of vessels would be expected to stop operating as a commercial fishing business due to the expected adverse effects of this proposed rule. The results suggest that a high number of the part-time vessels may not continue operating as a result of this proposed rule. However, based on available data, a general economic assessment utilizing gross revenue and operating cost information suggests that the financial conditions for many vessels are and have been poor, particularly for part-time vessels as the average net revenues for Q1, Q2, and Q3 vessels were negative based on 2012 data for non-permitted vessels in the Gulf of Mexico. Yet, at least some of these vessels continue to commercially harvest shrimp. This suggests either that available data incompletely capture the “economics” of these operations, or that the decision to harvest shrimp is based on criteria other than, or in addition to, considerations of profit and loss (*e.g.*, personal consumption of harvested shrimp and the associated value, the value some fishermen place on the commercial fishing lifestyle, etc.).

Despite acknowledgement that reducing revenues and imposing additional costs on businesses that already operate under a tenuous financial situation will, with some unknown degree of certainty, result in some vessels exiting the commercial shrimp industry, this analysis does not forecast how many vessels may do so. Instead, this analysis simply notes that the total reduction in gross revenues and total adverse effects

associated with this proposed rule will increase as more vessels cease operation.

Conversely, the more vessels that cease commercial fishing, the more likely that demand pressure on TED prices will be reduced (*i.e.*, TED prices will not increase over the assumed prices used in this analysis) and the total costs associated with purchasing TEDs will decrease as fewer vessels will need to buy them. Further, for vessels that continue to operate, they may harvest some portion of the shrimp traditionally harvested by the exiting vessels, thereby mitigating some of the shrimp loss to these vessels as a result of TED use.

Seven alternatives, including no action, were considered for the action in this proposed rule (Alternative 3 is the preferred alternative). The first alternative (Alternative 1, no action) to the action in this proposed rule would not expand the required use of TEDs and, as a result, would not achieve the objective of reducing the incidental bycatch and mortality of sea turtles in the Southeastern U.S. commercial shrimp fisheries.

The second alternative (Alternative 2) to the action in this proposed rule would have expanded the required use of TEDs to only vessels using skimmer trawls, pusher-head trawls, and wing nets (butterfly trawls) that were 26 feet and greater in length. This alternative would have been expected to affect fewer vessels (3,103) and reduce the total expected increase in TED costs and shrimp revenue loss compared to this proposed rule. However, this alternative was not selected because it would be expected to result in less protection of sea turtles (1,509-2,179 turtles, or a mid-point estimate of 1,844 turtles) than this proposed rule (1,730-2,500 turtles, or a mid-point estimate of 2,115 turtles).

The third alternative (Alternative 4) to the action in this proposed rule would have expanded the required use of TEDs to only vessels using skimmer trawls that were 26 feet and greater in length. This alternative would have been expected to affect fewer vessels (2,913) and reduce the total expected increase in TED costs and the shrimp revenue loss compared to this proposed rule. However, this alternative was not selected

because it would be expected to result in less protection of sea turtles (1,412-2,040 turtles, or a mid-point estimate of 1,726 turtles) than this proposed rule.

The fourth alternative (Alternative 5) to the action in this proposed rule would have expanded the required use of TEDs to all vessels using skimmer trawls regardless of vessel length. This alternative would, similar to Alternative 4, have been expected to affect fewer vessels (5,432) and reduce the total expected increase in TED costs and shrimp revenue loss compared to this proposed rule. However, this alternative was not selected because it would be expected to result in less protection of sea turtles (1,624-2,348 turtles, or a mid-point estimate of 1,986 turtles) than this proposed rule.

The fifth and sixth alternatives (Alternatives 6 and 7) to the action in this proposed rule would have expanded the required use of TEDs to all shrimp vessels regardless of trawl type but varying by fishing location (Alternative 6, state waters only; Alternative 7, all waters). These alternatives were not selected because they would have been expected to affect more vessels (9,711, both alternatives) and result in greater expected increases in TED costs and shrimp revenue loss compared to this proposed rule.

Locations and Times of Public Hearings

Public hearings will be held at the following locations:

1. Larose -- Larose Regional Park and Civic Center, 307 East 5th Street, Larose, LA 70373.
2. Gretna -- Coastal Communities Consulting, Inc. Offices, 925 Behrman Highway, Suite 15, Gretna, LA 70056.
3. Belle Chasse -- Belle Chasse Auditorium, 8398 Highway 23, Belle Chasse, LA 70037.
4. Biloxi -- Biloxi Visitor's Center, 1050 Beach Boulevard, Biloxi, MS 39530.
5. Bayou La Batre -- Bayou La Batre Community Center, 12745 Padgett Switch Road, Bayou La Batre, AL 36509.
6. Morehead City -- Crystal Coast Civic Center, 3505 Arendell Street,

Morehead City, NC 28557.

The public hearing dates are:

1. January 9, 2017, 4 p.m. to 6 p.m., Larose, LA.
2. January 10, 2017, 12 p.m. to 2 p.m., Gretna, LA.
3. January 10, 2017, 4 p.m. to 6 p.m., Belle Chasse, LA.
4. January 11, 2017, 4 p.m. to 6 p.m., Biloxi, MS.
5. January 12, 2017, 10 a.m. to 12 p.m., Bayou La Batre, AL.
6. January 18, 2017, 12 p.m. to 2 p.m., Morehead City, NC.

Vietnamese translation services will be available at the January 10, 2017, meeting in Gretna, LA.

List of Subjects in 50 CFR Part 223

Endangered and threatened species; Exports; Imports; Transportation.

Dated: December 12, 2016

Samuel D. Rauch III,

Deputy Assistant Administrator for Regulatory Programs,

National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR part 223 is proposed to be amended as follows:

PART 223--THREATENED MARINE AND ANADROMOUS SPECIES.

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

Authority: 16 U.S.C. 1531-1543; subpart B, § 223.201-202 also issued under 16 U.S.C. 1361 *et seq.*; 16 U.S.C. 5503(d) for § 223.206(d)(9).

2. In § 223.206, revise paragraphs (d)(2)(ii)(A)(3) and (d)(3)(i) to read as follows:

§ 223.206 Exceptions to prohibitions relating to sea turtles.

* * * * *

(d) * * *

(2) * * *

(ii) * * *

(A) * * *

(3) Has only a wing net rigged for fishing and is fishing only in Miami-Dade County, Florida;

* * * * *

(3) *Tow-time restrictions*—(i) *Duration of tows*. If tow-time restrictions are used pursuant to paragraph (d)(2)(ii), (d)(3)(ii), or (d)(3)(iii) of this section, a shrimp trawler must limit tow times. The tow time begins at the time that the trawl door enters the water and ends at the time that the trawl door is removed from the water. For a trawl that is not attached to a door, the tow time begins at the time that the entire net enters the water and ends at the time that the entire net is removed from the water. Tow times may not exceed:

* * * * *

3. In § 223.207,

a. Revise paragraphs (a)(4), (a)(6), (a)(7)(ii)(B) and (C), and (d)(3)(ii) and (iii);

and

b. Add paragraph (d)(3)(v) to read as follows:

§ 223.207 Approved TEDs.

* * * * *

(a) * * *

(4) *Space between bars*. The space between deflector bars and the deflector bars and the TED frame must not exceed 4 inches (10.2 cm) except for TEDs installed in

skimmer trawls, pusher-head trawls, and wing nets, where the space between deflector bars and the deflector bars and the TED frame must not exceed 3 inches (7.6 cm).

* * * * *

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

(7) * * *

(ii) * * *

(B) *The 71-inch opening.* The two forward cuts of the escape opening must not be less than 26 inches (66 cm) long from the points of the cut immediately forward of the TED frame. The resultant length of the leading edge of the escape opening cut must be no less than 71 inches (181 cm) with a resultant circumference of the opening being 142 inches (361 cm) (Figure 12 to this part). A webbing flap, as described in paragraph (d)(3)(ii) or (d)(3)(v) of this section, may be used with this escape hole, so long as this minimum opening size is achieved. Either this opening or the one described in paragraph (a)(7)(ii)(C) of this section must be used in all offshore waters and in all inshore waters in Georgia and South Carolina, but may also be used in other inshore waters.

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

* * * * *

(d) * * *

(3) * * *

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

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

flap. Chafing webbing described in paragraph (d)(4) of this section may not be used with this type of flap.

* * * * *

(v) *Small turtle TED flap.* If the angle of the deflector bars of a bent bar TED used by a skimmer trawl, pusher-head trawl, or wing net exceeds 45°, or if a double cover opening straight bar TED (at any allowable angle) is used by a skimmer trawl, pusher-head trawl, or wing net, the flap must not consist of twine size greater than number 15 (1.32-mm thick) on webbing flaps described in paragraphs (d)(3)(i), (d)(3)(ii), (d)(3)(iii), or (d)(3)(iv) of this section.

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