

causing shrimp loss. They claim that contrary to NMFS statements that larger openings will allow debris to escape, the shrimp losses will be compounded with the larger opening as water pressure forces these items to stay against the grid and the same water pressure opens the flap.

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

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

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

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

*Response:* NMFS disapproved the use of the Andrews soft TED (61 FR 66933, December 19, 1996) after extensive testing demonstrated that this TED did not exclude turtles effectively.

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

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

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

NMFS believes that both adult and sub-adult turtles were represented in the sample.

*Comment 11:* Some shrimp fishermen believe that the shrimp loss data gathered by NMFS on the double cover flap TED are flawed in many respects, including: (1) the tests were not conducted in areas representative of where they fish; (2) sample sizes were too small to be statistically valid; (3) the tests were done outside the shrimping season with low catch rates and low loads in the bag end. Higher loads would cause more water to back up and force open the flap and cause additional shrimp loss.

*Response:* Since publication of the proposed rule, NMFS conducted further testing of the double cover flap TED. From January through August, 2002, the double cover flap TED has been tested against current commercially available TEDs for shrimp loss aboard 12 commercial shrimp trawlers in the Gulf Area, and one trawler in the Atlantic Area. In the Gulf Area, 7 vessels fished in inshore and near shore areas (2 in Texas, 2 in Louisiana, 1 in Mississippi, 1 in Alabama and 1 in Florida). Offshore testing was conducted along the northeast coast of Florida by one vessel, the pink shrimp grounds of southwest Florida by two vessels, Louisiana by two vessels and Texas by one vessel. In order to obtain statistically valid data, a minimum of 20 comparative tows were conducted during each trip. Testing has included the shrimp season openings in Texas, Louisiana, and Mississippi. A total of 305 comparative tows were conducted. The double cover flap TED experienced a 0.1 percent shrimp gain when compared to current commercially available TEDs, which is not statistically different from zero.

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

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

*Response:* The data set in question resulted from testing conducted in 2000.