

## **Southeastern U.S. Atlantic, Gulf of Mexico Shrimp Trawl Fishery**

**Fishing gear type:** Trawl

**Current category:** Category II\*

**Basis for current classification on the LOF:** Based on interactions reported through observer reports, stranding data, and fisheries research data, with multiple strategic and non-strategic marine mammal stocks. Due to the lack of PBR data for most of the stocks and the low observer coverage in this fishery, NMFS conducted a qualitative analysis to determine the appropriate classification for this fishery. Even with low coverage, NMFS observed 12 dolphin takes (of which 11 were serious injuries or mortalities) since 1993; 11 of which were taken since 2002. Also, the final 2009 SARs note that "occasional interactions with bottlenose dolphins have been observed...and there is infrequent evidence of interactions from stranded animals." Further, Marine Mammal Authorization Program (MMAP) records list 1 dolphin take in shrimp trawl gear in South Carolina in 2002. Lastly, 13 dolphin takes, 10 of which were taken since 2002, have been documented by NMFS in Southeast U.S. research trawl operations, and/or relocation trawls conducted.

**Current list of marine mammal species/stocks injured/killed (a<sup>(1)</sup> indicates those stocks driving the fishery's classification):** Atlantic spotted dolphin, Gulf of Mexico (GMX) continental and oceanic; Bottlenose dolphin, GMX continental shelf; Bottlenose dolphin, Northern GMX coastal; Bottlenose dolphin, South Carolina/Georgia (SC/GA) coastal<sup>(1)</sup>; Bottlenose dolphin, Eastern GMX coastal<sup>(1)</sup>; Bottlenose dolphin, Western GMX coastal<sup>(1)</sup>; Bottlenose dolphin, GMX bay, wound, estuarine<sup>(1)</sup>; West Indian manatee, Florida (FL).

**Estimated number of current participants:** 4,950

**Take Reduction Teams/Plans that affect this fishery:** None.

**Year added to LOF:** 1996

**Category when originally listed:** Category III

**Basis for current classification on the LOF:** This fishery was categorized as a Category III based on over 10,000 observer hours in the Atlantic and over 17,000 observer hours in the Gulf of Mexico. No injuries or mortalities of any marine mammal species were observed. However, a shrimp trawl fisherman reported one dolphin mortality offshore due to entanglement with the lazy line. This animal was most likely a coastal GMX bottlenose dolphin.

**Estimated number of participants when originally listed:** >18,000

**Past names, if any:** Mid-Atlantic, Southeastern U.S. Atlantic, Gulf of Mexico shrimp trawl (until 2001).

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**Gear description/method for fishing:** The most commonly employed gear in this fishery is a double-rig otter trawl, which normally includes a lazy line attached to each bag's codend. The lazy line floats free during active trawling, and as the net is hauled back, it is retrieved with a boat- or grappling-hook to assist in guiding and emptying the trawl nets. Shrimp trawl soak time is about three hours.

**Target species:** Brown, pink and white shrimp within estuaries, and near coastal and offshore regions. Royal Red shrimp along the deep continental slope.

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\* The fishery is classified based on mortalities and serious injuries of a marine mammal stock greater than 1% and less than 50% (Category II) of the stock's Potential Biological Removal (PBR) level.

**Spatial/temporal distribution of effort:** The pelagic or bottom trawl fishery operating virtually year-round in the Atlantic Ocean from NC through FL, and in the Gulf of Mexico from FL through TX. Effort occurs in estuarine, near shore coastal waters, and along the continental slope of the Atlantic and estuarine, near shore coastal, and offshore continental shelf and slope waters in the Gulf of Mexico. Fishery typically operates from sunset to sunrise when shrimp are most likely to swim higher in the water column

**Levels of observer coverage each year<sup>†</sup>:** This fishery was observed between 1992 and 2006 under a voluntary program, which became mandatory in 2007. Observer coverage was less than 1% for all observed years.

**Management and regulations:** Although shrimp trawlers are required under Endangered Species Act regulations to use turtle excluder devices to reduce sea turtle bycatch (50 CFR 223.206), the fishery currently does not use any method or gear modification to deter, or reduce bycatch of, marine mammals.

## History of Changes on the LOF

### 2012 LOF:

- Added bottlenose dolphin (Northern GMX coastal stock) and bottlenose dolphin (GMX continental shelf stock) to the list of species/stocks killed/injured in this fishery. A bottlenose dolphin was killed in this fishery in 2003 and could have belonged to the Northern GMX coastal stock or a GMX bay, sound and estuarine stock (which is already included on the list of species or stocks killed or injured in this fishery). Additionally, 1 or more of 6 unidentified dolphins taken in this fishery from 1992-2008 could be from this stock (2010 SAR). A bottlenose dolphin (GMX continental shelf stock) was killed in this fishery in 2008. However, the PBR for this stock is undetermined, so NMFS cannot determine the exact percentage of PBR this take would represent. Additionally, 3 or 4 unidentified dolphins injured or killed in this fishery from 1992-2008 could be from this stock (2010 SAR).
- Updated the name of the Atlantic spotted dolphin stock from “Northern GMX” to “GMX continental and oceanic to reflect the stock names in the 2010 SAR.
- Combined the bottlenose dolphin (GA coastal stock) and bottlenose dolphin (SC coastal stock) and rename the stock as “bottlenose dolphin (SC/GA coastal stock),” to reflect the stock names in the 2010 SAR.

### 2011 LOF:

- Elevated to Category II based on interactions reported through observer reports, stranding data, and fisheries research data, with multiple strategic marine mammal stocks (bottlenose dolphin, SC coastal; bottlenose dolphin, GA coastal; bottlenose dolphin, Northern Gulf of Mexico coastal [Eastern, Northern, and Western]; and bottlenose dolphin, Gulf of Mexico bay, sound and estuarine) and non-strategic marine mammal stocks (bottlenose dolphin, Northern Gulf of Mexico continental shelf; and spotted dolphin, Northern Gulf of Mexico). Due to the lack of PBR data and low observer coverage (<1% from 1992-2006), NMFS conducted a qualitative analysis to determine the appropriate classification for this fishery. Even with low coverage, NMFS observed 12 dolphin takes (of which 11 were serious injuries or mortalities) since 1993; 11 of which were taken since 2002. Four of the takes were confirmed as bottlenose dolphins; the remaining 8 may be either bottlenose or Atlantic spotted dolphins. In addition, the final 2009 SARs note that "occasional interactions with bottlenose dolphins have been observed...and there is infrequent evidence of interactions from stranded animals." Further, Marine Mammal Authorization Program (MMAP) records list 1 dolphin take in shrimp trawl gear in South Carolina in 2002. Additionally, 13 (of which 12 were serious injuries or mortalities; 1 Atlantic spotted 12 bottlenose) dolphin takes, 10 since 2002, have been documented by NMFS in Southeast U.S. research trawl operations, and/or relocation trawls conducted.
- Updated the stock name for bottlenose dolphins killed/injured in this fishery, based on the revised stock structure presented in the final 2008 and 2009 SARs. Replaced bottlenose dolphin (WNA coastal) with the following stocks: bottlenose dolphin (GA coastal) and bottlenose dolphin (SC coastal). Retained a superscript “1” after these stocks because the 2010 LOF includes a superscript “1” following bottlenose dolphin (WNA coastal).

<sup>†</sup> Observer coverage levels include the latest information reported in the most current final Stock Assessment Report (SAR).

- Added Atlantic spotted dolphin (Northern GMX stock) to the list of species/stocks killed/injured. An Atlantic spotted dolphin (Northern GMX stock) was killed in 2006 in Southeast U.S. research trawl operations and/or relocation trawls conducted in conjunction with dredging and other marine construction activities. Also, most of the observer reports from this fishery list only "dolphin" as the marine mammal killed/injured, and NMFS was able to conclusively identify only four of the twelve takes in this fishery since 2002 as bottlenose dolphins. Based on the location of the observed takes for the 8 unidentified dolphins, the remainder of the observed takes can either be bottlenose dolphin or Atlantic spotted dolphin. Therefore, given the low observer coverage in this fishery, the location of the observed takes for the unidentified dolphin species in this fishery, and the observed mortality of an Atlantic spotted dolphin in research trawl operations that operate in a similar area and manner to commercial shrimp trawl operations, it is reasonable that takes of Atlantic spotted dolphins are also occurring in the commercial fishery.
- Estimated number of participants was updated from >18,000 to 4,950.

2005 LOF: Added the following stocks to the list of species/stocks killed/injured because interactions have been documented in recent SARs: bottlenose dolphin (Western GMX coastal), bottlenose dolphin (Eastern GMX coastal), bottlenose dolphin (GMX Bay, Sound, and Estuarine), and West Indian manatee (FL).

2001 LOF: Renamed from the "Mid-Atlantic, Southeastern U.S. Atlantic, Gulf of Mexico shrimp trawl" fishery to the "Southeastern U.S. Atlantic, Gulf of Mexico shrimp trawl" fishery to reflect that the fishery operates from North Carolina into the Gulf of Mexico.