NOAA's National Weather Service would like to add a TsunamiReady Supporter Application Form to its currently approved collection, which includes StormReady, TsunamiReady, StormReady/TsunamiReady, and StormReady Supporter application forms. The title would then change to ''StormReady, TsunamiReady, StormReady/TsunamiReady, StormReady Supporter and TsunamiReady Supporter Application Forms''. This new application would be used by entities such as businesses and not-for-profit institutions that may not have the resources necessary to fulfill all the eligibility requirements to achieve the full TsunamiReady recognition. The form will be used to apply for initial TsunamiReady Supporter recognition and renewal of that recognition every five years. The federal government will use the information collected to determine whether an entity has met all of the criteria to receive TsunamiReady Supporter recognition.

Affected Public: Business or other for-profit organizations; state, local or tribal government.

Frequency: Every six years or one time only.

Respondent's Obligation: Voluntary.

This information collection request may be viewed at *reginfo.gov.* Follow the instructions to view Department of Commerce collections currently under review by OMB.

Written comments and recommendations for the proposed information collection should be sent within 30 days of publication of this notice to *OIRA_Submission@omb.eop.gov* or fax to (202) 395–5806.

Dated: July 18, 2016.

Sarah Brabson,

NOAA PRA Clearance Officer.

[FR Doc. 2016–17305 Filed 7–21–16; 8:45 am]

BILLING CODE 3510–KE–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

[Docket No. 131105931–6595–02]

RIN 0648–XC970

Endangered and Threatened Wildlife and Plants: Notice of 12-Month Finding on a Petition To List the Caribbean Electric Ray as Threatened or Endangered Under the Endangered Species Act (ESA)

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

ACTION: Notice of 12-month finding and availability of status review document.

SUMMARY: We, NMFS, announce a 12-month finding and listing determination on a petition to list the Caribbean electric ray (*Narcine bancroftii*) as threatened or endangered under the Endangered Species Act (ESA). We have completed a comprehensive status review of the species in response to a petition submitted by WildEarth Guardians and Defenders of Wildlife and considered the best scientific and commercial data available. Based on the best scientific and commercial data available, including the status review report (Carlson *et al.* 2015), we have determined that the species is not currently in danger of extinction throughout all or a significant portion of its range and is not likely to become so within the foreseeable future. Therefore, we conclude that the Caribbean electric ray does not warrant listing at this time.

DATES: This finding was made on July 22, 2016.

ADDRESSES: The Caribbean electric ray status review document associated with this determination and its references are available by submitting a request to the Species Conservation Branch Chief, Protected Resources Division, NMFS Southeast Regional Office, 263 13th Avenue South, St. Petersburg, FL 33701–5505, Attn: Caribbean Electric Ray 12-month Finding. The report and references are also available electronically at: *http://sero.nmfs.noaa.gov/protected_resources/listing_petitions/index.html.*

FOR FURTHER INFORMATION CONTACT: Jennifer Lee, NMFS, Southeast Regional Office (727) 551–5778; or Marta Nammack, NMFS, Office of Protected Resources (301) 427–8469.

SUPPLEMENTARY INFORMATION:

Background

On September 7, 2010, we received a petition from WildEarth Guardians to list the Caribbean electric ray as threatened or endangered throughout its historical and current range and to designate critical habitat within the territory of the United States concurrently with listing the species under the ESA. On March 22, 2011 (76 FR 15947), we made a 90-day finding that the petition did not present substantial scientific or commercial information indicating that the petitioned action may be warranted.

On March 22, 2012, we received a 60-day notice of intent to sue from WildEarth Guardians on the negative 90-day finding. On February 26, 2013, WildEarth Guardians filed a Complaint for Declaratory and Injunctive Relief in the United States District Court for the Middle District of Florida, Tampa Division, on the negative 90-day finding. On October 1, 2013, the Court approved a settlement agreement under which we agreed to accept a supplement to the 2010 petition, if any was provided, and to make a new 90-day finding based on the 2010 petition, the supplement, and any additional information readily available in our files.

On October 31, 2013, we received a supplemental petition from WildEarth Guardians and Defenders of Wildlife. On January 30, 2014, we published a 90-day finding with our determination that the petition presented substantial scientific and commercial information indicating that the petitioned action may be warranted (79 FR 4877). In our 90-day finding, we requested scientific and commercial information from the public to inform the status review on the species. Specifically, we requested information on the status of the Caribbean electric ray throughout its range including: (1) Historical and current distribution and abundance of this species throughout its range; (2) historical and current population trends; (3) life history and habitat requirements; (4) population structure information, such as genetics data; (5) past, current and future threats specific to the Caribbean electric ray, including any current or planned activities that may adversely impact the species, especially information on destruction, modification, or curtailment of habitat and on bycatch in commercial and artisanal fisheries worldwide; (6) ongoing or planned efforts to protect and restore the species and its habitat; and (7) management, regulatory, and enforcement information on the species and its habitats. We received information from the public in response to the 90-day finding and incorporated relevant information in the species status review.

Listing Determinations Under the ESA

We are responsible for determining whether the Caribbean electric ray is threatened or endangered under the ESA (16 U.S.C. 1531 *et seq.*). Section 4(b)(1)(A) of the ESA requires us to make listing determinations based solely on the best scientific and commercial data available after conducting a review of the status of the species and after taking into account efforts being made by any state or foreign nation to protect the species.

To be considered for listing under the ESA, a group of organisms must constitute a ''species,'' which is defined in section 3 of the ESA to include taxonomic species and ''any subspecies of fish, or wildlife, or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.'' In our 90-day finding we found that the petitioned species constitutes a valid species eligible for listing under the ESA based on the information presented in the petition, along with information readily available in our files. To determine whether the Caribbean electric ray warrants listing under the ESA, we convened a Status Review Team (SRT). The SRT was comprised of NMFS Southeast Fisheries Science Center and NMFS Southeast Regional Office biologists. The SRT reviewed an unpublished dissertation that separated the genus *Narcine* of the western Atlantic Ocean into two species: *N. brasiliensis,* and *N. bancroftii* (de Carvalho 1999). The SRT noted some taxonomic uncertainty (see *Taxonomy and Species Description*), but accepted de Carvalho (1999) as the best available information on the species taxonomy. *Narcine bancroftii* is recognized as a valid species in the Catalog of Fishes, the authoritative reference for taxonomic fish names and taxonomic revision (Eschmeyer 2015). We accept both de Carvalho (1999) and Eschmeyer (2015) as the best available science at this time, thus we maintain that *Narcine bancroftii* is a valid species eligible for listing.

When we consider whether a species might qualify as threatened under the ESA, we must consider the meaning of the term ''foreseeable future.'' It is appropriate to interpret ''foreseeable future'' as the horizon over which predictions about the conservation status of the species can be reasonably relied upon. The foreseeable future considers the life history of the species, habitat characteristics, availability of data, particular threats, ability to predict threats, and the ability to forecast the effects of these threats and future events on the status of the species under consideration. Because a species may be susceptible to a variety of threats for which different data are available, or which operate across different time scales, the foreseeable future is not necessarily reducible to a particular number of years or a single timeframe.

Under section 4(a) of the ESA, we must determine whether any species is endangered or threatened due to any of the following five factors: (A) The present or threatened destruction, modification, or curtailment of its habitat or range; (B) overutilization for commercial, recreational, scientific, or educational purposes; (C) disease or predation; (D) the inadequacy of existing regulatory mechanisms; or (E) other natural or manmade factors affecting its continued existence (sections 4(a)(1)(A) through (E)).

The SRT completed a status review report, which summarized the best available information on the taxonomy, distribution, abundance, life history and biology of the species, analyzed the threats identified as potentially impacting the status of the species, and conducted an extinction risk analysis (ERA) to determine the status of the species. The results of the ERA are discussed below under ''Extinction Risk Analysis.'' The status review report incorporates relevant information received from the public in response to our request for information (79 FR 4877; January 30, 2014). The draft status review report was submitted to 3 independent peer reviewers and comments and information received from the peer reviewers were addressed and incorporated as appropriate into the draft report before finalizing it. The peer review report is available at *http://www.cio.noaa.gov/services_programs/prplans/PRsummaries.html.*

Section 3 of the ESA defines an endangered species as ''any species which is in danger of extinction throughout all or a significant portion of its range'' and a threatened species as one ''which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.'' Thus, we interpret an ''endangered species'' to be one that is presently in danger of extinction. A ''threatened species'' is not currently in danger of extinction but is likely to become so within the foreseeable future. The key statutory difference between a threatened and endangered species is the timing of when a species may be in danger of extinction, either presently (endangered) or in the foreseeable future (threatened).

In determining whether the species meets the standard of endangered or threatened, we considered the specific life history and ecology of the species, the nature of threats, the species' response to those threats, and population numbers and trends. We considered information summarized in the status review report (Carlson *et al.* 2015). We considered each threat that was identified, both individually and cumulatively. For purposes of our analysis, the mere identification of factors that could impact a species negatively is not sufficient to compel a finding that ESA listing is appropriate. In considering those factors that might constitute threats, we look beyond mere exposure of the species to the factor to determine whether the species responds, either to a single or multiple threats, in a way that causes actual impacts to the species' status. In making this finding, we have considered and evaluated the best available scientific and commercial information, including information received in response to our 90-day finding.

The following sections provide key information presented in the status review report (Carlson *et al.* 2015).

Summary of the Status Review

Life History, Biology and Ecology

Taxonomy and Morphology

Narcine bancroftii is a species in the phylum *Chondrata,* class *Chondrichthyes,* order *Torpediniforms* and family *Narcinidae.* Common names for this species include the lesser electric ray, Bancroft's numbfish, and Caribbean electric ray. The SRT titled the status review report and referred to the species in its report as the 'lesser electric ray' because the species is almost unanimously referred to as the lesser electric ray, including in the published literature. In our finding, we retain the use of 'Caribbean electric ray' for the sole purpose of being consistent with the petitioned action.

Rays within the genus *Narcine,* collectively known as numbfishes, occur globally in temperate to tropical marine waters and according to Eshmeyer (2015) are composed of 23 species. Until recently, rays of the genus *Narcine* within the western North Atlantic Ocean were considered to be one widely distributed species, *N. brasiliensis* (von Olfers 1831). However, Garman (1913) was the first to notice that there was sufficient regional variability among individuals and suggested that *N. brasiliensis* could be separated into two distinct species. Later, in a taxonomic revision of the genus *Narcine,* de Carvalho (1999) separated numbfishes of the western Atlantic Ocean into two species: *N. brasiliensis,* known as the Brazilian electric ray, and *N. bancroftii* (Griffith and Smith 1834), known as Bancroft's numbfish, or more commonly, the lesser electric ray. *N. brasiliensis* is thought to range from southeastern Brazil to northern Argentina, whereas *N. bancroftii* is reported to range from North Carolina to northeastern Brazil, including the Gulf of Mexico (GOM) and the Caribbean Sea (de Carvalho 1999).

The SRT noted that ''the taxonomy of *Narcine* in the western Atlantic Ocean remains uncertain because taxonomic changes are sometimes accepted in ichthyology without adequate or supporting proof and the de Carvalho (1999) study remains unpublished.'' The SRT pointed out the need for a genetics-based examination (*e.g.,* mitochondrial DNA analysis) of *Narcine* specimens from throughout their known range in the western Atlantic Ocean to support the presence of two distinct species. However, as we previously discussed (see Listing Determinations Under the ESA), we accept both de Carvalho (1999) and Eschmeyer (2015) as the best available science at this time, thus we maintain that *Narcine bancroftii* is a valid species eligible for listing.

Species Description

The Caribbean electric ray is a small, shallow-water batoid characterized by a flattened, oval-shaped disc, large pelvic fins, and oversized dorsal and caudal fins that cover most of its tapering tail (Tricas *et al.* 1997). The dorsal surface of the Caribbean electric ray varies from a light yellow brown to a darker greyish brown with dark blotches over the snout and small incomplete eyespots over the disc and base of the tail. The underside of the species is white or cream colored sometimes with grey or brown blotches (McEachran and Carvalho 2002). The Caribbean electric ray has two electric organs that can produce 14–37 volts of electricity (Smith 1997; Tricas *et al.* 1997). Outlines of these kidney-shaped electric organs may be visible behind the eyes as well as spiracles with rounded tubercles along the edges next to the eyes (Smith 1997). Each organ consists of a honeycomb of 280 to 430 columns, containing several hundred electric plates, and the organs combined account for about a sixth of total body weight (Tricas *et al.* 1997).

Range and Distribution

The Caribbean electric ray is widely distributed in warm temperate to tropical waters of the western Atlantic from North Carolina, through the GOM, the Caribbean, the Lesser and Greater Antilles, and the north coast of South America (McEachran and de Carvalho 2002). Bigelow and Schroeder (1953) wrote: ''This Electric Ray has been reported from localities so widely distributed, and it is so well represented in the larger museums of both America and Europe, that it is expected anywhere in the American littoral [zone], provided that the type of bottom and depth be suitable . . .'' The southern extent of the range of Caribbean electric rays is uncertain. De Carvalho (1999) reported specimens taken from the southern hemisphere off the State of Bahia, Brazil, however, McEachran and de Carvalho (2002) later placed the southern extent of the range within the northern hemisphere off Venezuela.

The Caribbean electric ray exhibits a patchy distribution throughout its range and is locally abundant in areas that contain specific habitat characteristics. Fishery independent trawl surveys in the Gulf of Mexico show that the species is patchily distributed (see *Abundance and Trends*). The species' local abundance is best documented by Rudloe (1989a) who found Caribbean electric rays abundant in barrier beach surf zones and adjacent passes between barrier islands at depths of 8–16 m around Cape San Blas, Florida, in the northern Gulf of Mexico. Rudloe (1989a) collected 3,913 rays from March 1985 to March 1987 from sites in those areas at rates ranging from 3–31 rays per hour. Rudlow (1989a) points out that ''the rays were concentrated over an extremely limited area on each bar'' and that ''As little as several tens of meters change in position could determine whether there were two or 20 rays in the catch.''

Further, data indicate seasonal variation in their local distributions. Rudloe (1989a) suggested that ''rays are localized in their habitats during the warm months at least, and move directly from one preferred locality to another or remain in one area over a period of weeks to months.'' The species is evidently migratory but its movements are poorly known. Existing information suggests at least some Caribbean electric ray seasonal migrations are likely associated with water temperature. Bigelow and Schroeder (1953) stated: ''Captures of *Narcine brasiliensis* [*bancroftii*] off the Texas coast in the months of September, November, and March show that it winters that far north and probably does likewise at least along the southern part of Florida. However, northward along the Atlantic Coast of the United States, to North Carolina, all of the records of it, except one, have been in summer.'' Similarly, Coles (1915) reported Caribbean electric rays are present only off the northernmost part of their range (North Carolina) during the summer. Rudloe (1989a) stated that within the GOM, rays were caught in the surf zone at Alligator Point, Florida, from March to December, and no rays were taken anywhere in the area from December to February. Funicelli (1975) reported that Caribbean electric rays are found at the deeper ends of their depth range during winter in the northern GOM, particularly during colder months from November–February.

Habitat Use

The Caribbean electric ray inhabits relatively shallow waters, often within the surf zone (Coles 1910; Fowler 1910; Bigelow and Schroeder 1953; Hoese and Moore 1998; Rudloe 1989a). The Caribbean electric ray generally occupies depths ranging from the intertidal zone to approximately 37 m (Bigelow and Schroeder 1953, Rudloe 1989a); however, there is at least one report of a Caribbean electric ray being captured at a depth of 340 m (Schwartz 2010). Fisheries independent data collected by NMFS verify that the Caribbean electric ray is primarily a shallow water species. From 2002–2013, 5,137 trawls were conducted in the northern GOM at randomly selected stations ranging in depth from 4.7–326 m. A total of 127 Caribbean electric rays were collected, and the mean depth of capture was 9.29 m (range 5.20–17.50 m; S.D. 2.93). Environmental data were collected during these surveys demonstrating that this species inhabits waters ranging in temperature from 21.9–30.2 °C (mean = 27.18 °C; S.D. = 1.57), salinity from 27.7–36.9 ppt (mean = 34.10 ppt; S.D. 2.32), dissolved oxygen from 2.0–3.7 mg/l (mean = 2.85 mg/l; S.D. = 0.99) and turbidity from 0.6–94.0 percent transmissivity (mean = 37.77 percent transmissivity; S.D. = 28.23). These data are consistent with past reports of environmental conditions associated with the presence of Caribbean electric rays (*e.g.,* Gunter 1945, Rudloe 1989a, Steiner *et al.* 2007).

The best available information on the species indicates that it occurs predominately in sand bottom habitats. While Caribbean electric rays have a relatively broad distribution in the western Atlantic Ocean, the species is reported to occur almost exclusively on sand bottom habitats (Coles 1910, Bigelow and Schroeder 1953, Rudloe 1989a). For example, Rudloe (1989a) determined that ''barrier beach surf zones and on [sand]bars adjacent to passes between barrier islands'' are the preferred habitat for Caribbean electric rays. Both of these habitats are dominated by sand. Anecdotal reports also document Caribbean electric rays exclusively in high energy beach and sandbar habitats. In NMFS fisheries-independent trawl survey data, all Caribbean electric ray specimens recorded in the GOM were collected over sand bottom habitats. The SRT found only one study of Caribbean electric rays occurring in mud and fine silt habitats (*i.e.,* Dean *et al.* 2005).

Caribbean electric rays are generally nocturnal and spend daylight hours buried under the sand. Rudloe (1989a) noted that sampling was limited to night-time when the rays were active. Numerous reports of Caribbean electric ray sightings document that these rays are most commonly found buried in the sand with only their spiracles visible.

Age and Growth

There are no age and growth studies for this species. McEachran and de Carvalho (2002) report size at birth at 9–10 cm with maximum growth to 58 cm TL. Observations of Rudloe (1989a) suggest rapid growth during the first year. Rudloe (1989a) estimated that newborn rays less than 14 cm total length (TL) in late summer attain a size of 15–19 cm TL by fall. Rudloe (1989a) reported growth was dormant January and February and then resumed in March, with young attaining a size of 20–29.9 cm TL by the end of their first year.

Reproductive Biology

Estimates of size at reproductive maturity for male Caribbean electric rays range from 20 to 26 cm TL (Bigelow and Schroeder 1953, Funicelli 1975, de Carvalho 1999, Moreno *et al.* 2010). Females are reported to reach a larger size than males at reproductive maturity. The smallest reported female with well-developed gonads measured 26 cm TL (Funicelli 1975), and the smallest gravid female measured 27.1 cm TL (Bigelow and Schroeder 1953).

Rudloe (1989a) observed that all the females larger than 29 cm TL, both in captivity and collected from the field off Florida, were gravid in July. This indicates that the reproductive cycle is annual, and adult females in the population are capable of reproducing each year. Moreno *et al.* (2010) verified annual reproduction by mature females. Rudloe (1989a) documents that females give birth off Florida in August and September in the surf zone. Rudloe (1989a) also observed a peak in newborn rays at more offshore Florida locations in November (*i.e.,* at West Pass) and December (*i.e.,* at Cape San Blas), but could not determine if these rays were born offshore or had immigrated from the beach. Rudloe (1989a) did not estimate gestation period of Caribbean electric rays. In the Colombian Caribbean Sea, Moreno *et al.* (2010) found that the gestation period lasts approximately 4 months, with birth occurring from February to April.

The brood size of female Caribbean electric rays has been reported as 14 by Bean and Weed (1911), 4–15 by Bigelow and Schroeder (1953), 5–13 by de Carvalho (1999), and 1–14 by Moreno *et al.* (2010).

Diet and Feeding

Caribbean electric rays are reported to feed on small, benthic organisms (Moreno *et al.* 2010). Funicelli (1975) observed annelids in 84 percent of the Caribbean electric ray stomachs he examined from the northern GOM, which was in agreement with the limited data presented by Gudger (1912) and Bigelow and Schroeder (1953). Fishes within the order Anguilliformes were the next most abundant prey (30 percent of individuals), followed by arthropods and molluscs. Arthropods were the dominant prey type found in small individuals less than 300 mm TL (Funicelli 1975). Moreno *et al.* (2009) and Grijalba-Bendeck *et al.* (2012) reported similar findings for Caribbean electric rays collected in the Caribbean Sea off Colombia with annelids occurring in the majority of stomachs examined. Both studies reported that arthropods constituted a larger portion of the diet than anguilliform fishes. A diet composed primarily of annelids has also been reported for the closely related Brazilian electric ray (Goitein *et al.* 1998).

Dean and Motta (2004a and b) characterize Caribbean electric ray feeding behavior and kinematics. The Caribbean electric ray is a benthic suction feeder with highly protrusible jaws. The Caribbean electric ray has the ability to protrude its jaws by nearly 100 percent of its head length to excavate buried polychaetes.

Predation and Disease

Almost nothing is known of natural predation on the Caribbean electric ray. Presumably its electric organs deter potential predators, such as sharks and dolphins. Rudloe (1989a) reported that tagged rays released off trawlers were repeatedly observed to be actively avoided by both sharks and dolphins that fed heavily on other rays and bony fishes as they were culled overboard. A researcher reported observed consumption of Caribbean electric rays by large red drum that were captured on bottom longlines and dissected. It was not clear to the researcher whether the rays were discarded bycatch that were opportunistically consumed or not (M. Ajemian, Texas A&M-Corpus Christi, pers. comm. to Jennifer Lee, NMFS, June 19, 2015). Similarly, there is scant information on disease within the species. Tao (2013) reported that bacteria, such as *Vibrio* species, are prevalent in the blood of healthy Caribbean electric rays. This condition is not uncommon among chondrichthyan fishes.

Status, Abundance and Trends

The International Union for the Conservation of Nature (IUCN) Red List Assessment classifies the Caribbean electric ray as Critically Endangered (de Carvalho *et al.* 2007). The IUCN Red List assessment notes that the species has declined 98 percent since 1972 in the northern GOM according to a study by Shepherd and Myers (2005) of trawl data from the Southeast Area Monitoring and Assessment Program (SEAMAP). The IUCN Red List assessment reports that ''similar high rates of decline are seen in the U.S. coastal areas between Cape Canaveral (Florida) and Cape Hatter[a]s (North Carolina) in U.S. trawl surveys between 1989 and 2001 (a decline to 5% during this period)''. The IUCN also states that diver survey data from the Reef Environmental Education Foundation (REEF) program show similar rates of decline for Caribbean electric ray between 1994 and 2004 in eastern Florida and the Florida Keys. The Red List Assessment formed the basis of the petition to list Caribbean electric ray under the ESA.

To fully evaluate the above purported declines in abundance and rarity of the species, the SRT attempted to find any and all abundance data related to the species. This included a review of the known scientific literature, internet searches, and communication with state and Federal resource agencies that monitor fisheries. There are no population size estimates available for Caribbean electric rays. The SRT acquired the original data sets used for the IUCN assessment and conducted an independent analysis of these data. The SRT also considered a variety of other smaller datasets and encounter reports it acquired in forming its conclusions about the abundance and trends of the species. While some of these other data were anecdotal in nature and couldn't be used to statistically assess trends in abundance, the SRT believed they were useful in illustrating recent encounters of the species. Below we provide a summary of each data source considered and of the SRT's associated findings.

Gulf of Mexico SEAMAP

The primary source of fishery independent data reviewed was Gulf of Mexico SEAMAP data. The NMFS Southeast Fisheries Science Center Mississippi Laboratories have conducted trawl surveys in the northern GOM dating back to the 1950s. Early work was exploratory and often only recorded catch of target species. In 1972 a standardized fall trawl survey began as a part of a resource assessment program.

Then in 1982 a standardized summer trawl survey began under the SEAMAP. Finally, in 1987, the SEAMAP was adopted in the fall, thus unifying the two surveys. SEAMAP is a collaborative effort between Federal, state and university programs designed to collect, manage and distribute fishery independent data throughout the region. The primary objective of this trawl survey is to collect data on the abundance and distribution of demersal organisms in the northern GOM. The survey is conducted semi-annually (summer and fall) and provides an important source of fisheries independent information on many commercially and recreationally important species throughout the northern GOM (Pollack and Ingram 2014, Pollack & Ingram 2015). A full description of the historical and current surveys can be found in Nichols (2004) and Rester (2015).

Shepherd and Myers (2005) examined trends in elasmobranch abundance from SEAMAP data using the longest continuous temporal coverage (1972–2002) for the areas between 10 and 110 m in depth near Alabama, Mississippi and Louisiana (*i.e.,* statistical zones 11, 13–16). The authors correctly noted that *N. brasiliensis* has been historically misidentified and is not known to inhabit the GOM. Thus, all *N. brasiliensis* and *Narcine* species identified within the trawl survey data were treated as *N. bancroftii* during the analysis. Using a generalized linear modeling approach to correct for factors unrelated to abundance, Shepherd and Myers (2005) reported a decline of 98 percent since the baseline abundance of Caribbean electric rays in 1972 in the northern GOM, *i.e.* the number of Caribbean electric rays documented in the survey that year.

The SRT also used a generalized linear model approach in its re-analysis of the Gulf SEAMAP data. In statistics, a covariate is a variable that is possibly predictive of the outcome under study. Covariates considered in the analysis that may have affected abundance include year, area, water depth, and time-of-day. Irrespective of statistical methodology, the major difference between Shepherd and Myers (2005) and the analysis conducted by the SRT is the former did not take into account major changes in survey design and how they would affect the relative abundance of electric ray. There also was an apparent misunderstanding of how the catch was sorted.

Because there were major changes in survey design and survey coverage between 1972–1986 and 1987–2013 (Pollack and Ingram 2014), the SRT determined that using one continuous time series as Shepherd and Myers (2005) did was inappropriate. Instead, the SRT used three separate time series: Fall SEAMAP 1972–1986, Fall SEAMAP 1988–2013, and Summer SEAMAP 1982–2013. The Fall SEAMAP 1987 trawl survey was omitted from analysis because the cruise track differed from that of all the other surveys (counter-clockwise around the northern GOM and missed half of the area off Texas due to weather). The SRT extended the analysis of these survey data 11 years beyond the analysis by Shepherd and Myers (2005), to reflect the best available data and the most complete representation of abundance over time in the survey. Similar to Shepherd and Myers (2005), all *N. brasiliensis* and *Narcine (I, sp.* were treated as *N. bancroftii* for this analysis.

The abundance index constructed for Fall SEAMAP 1972–1986 was limited to NMFS statistical zones 11, 13, 14 and 15 (Figure 1). Sampling outside of these zones was inconsistent; therefore, the analysis was limited to this core area. In addition, all stations deeper than 75 m were removed from the dataset since there were no records of Caribbean electric ray occurring at those depths from any year of the survey. There are, in actuality, only two records in the entire SEAMAP data set of Caribbean electric ray occurring beyond 36.5 m, one in 1972 at 42 m and one in 1975 at 64 m (depths for these stations were verified by the NOAA National Geophysical Data Center, *http://www.ngdc.noaa.gov/mgg/coastal/crm.html*). The second index constructed was Fall SEAMAP 1988–2013. Following the methods outlined for the Fall SEAMAP survey, data for this index were limited to NMFS statistical zones 10–21 (excluding 12), and at stations shallower than 31 m. The third index constructed was Summer SEAMAP 1982–2013. Again following the methods outlined for the previous time series, data for this index were limited to NMFS statistical zones 10—21 (excluding 12), and at stations shallower than 33 m.

There were no discernable trends in relative abundance (CPUEs) of Caribbean electric ray in any of the three Gulf of Mexico SEAMAP indices. All three time series analyzed were relatively flat with peaks in abundance scattered throughout the abundance trend. Within the northern Gulf of Mexico 9,876 tows were included in the analysis, with 624 Caribbean electric rays captured. Most captures occurred off the coast of Louisiana and Texas. Shepherd and Myers (2005) indicated that only 78 individuals were captured from 1972–2002. However, the SRT identified 351 individuals recorded from the same time period, more than four times as many. Shepherd and Myers' (2005) exclusion of data off Texas explains this partly, but the discrepancy also reflects their lack of understanding of how the data were sampled (See ''sampled versus select'' discussion in Carlson *et al.* 2016). The distribution of Caribbean electric ray seems to be heavily concentrated along the barrier islands around south Texas and Mississippi and Louisiana. However, off the coast of Mississippi and Louisiana the survey is conducted from the National Oceanic and Atmospheric Administration (NOAA) Ship *Oregon II,* which cannot fish in waters shallower than 9 m due to the vessel's draft. Presently, efforts are being made to include waters as shallow as two fathoms (4 m) in the sampling universe, but there are only a few research vessels that can sample that shallow. With the proportional allocation of stations by NMFS statistical zone, very few stations may end up in these shallow depths in future survey years. The SRT noted this could lead to a decrease in Caribbean electric rays captured by the survey in the future because SEAMAP is no longer sampling their habitat and therefore would not reflect abundance changes. Overall, the SRT concluded the Caribbean electric ray is a rare species to encounter during the trawl surveys due to their shallow-water habitat and the inability of research vessels to sample that habitat.

South Atlantic SEAMAP

The SRT also reviewed South Atlantic SEAMAP data. A similar SEAMAP survey occurs in the Atlantic Ocean off the southeastern U.S. East Coast. Samples are collected by trawl from the coastal zone of the South Atlantic Bight between Cape Hatteras, North Carolina, and Cape Canaveral, Florida. Multi-legged cruises are conducted in spring (early April–mid-May), summer (mid-July–early August), and fall (October–mid-November). Stations are randomly selected from a pool of stations within each stratum. The number of stations sampled in each stratum is determined by optimal allocation. From 1990–2000, the survey sampled 78 stations each season within 24 shallow water strata. Beginning in 2001, the number of stations sampled each season in the 24 shallow water strata increased to 102, and strata were delineated by the 4-m depth contour inshore and the 10-m depth contour offshore. In previous years (1990–2000), stations were sampled in deeper strata with station depths ranging from 10 to 19 m in order to gather data on the reproductive condition of commercially important penaeid shrimp. Those strata were abandoned in 2001 in order to intensify sampling in the shallower depth-zone. Further details are available in Eldridge (1988).

Neither we nor the SRT could find a reference or analysis to support the IUCN Red List assessment's statement regarding high rates of decline in Caribbean electric rays in U.S. coastal areas between Cape Canaveral, Florida and Cape Hatteras, North Carolina. The SRT used a generalized linear modeling approach to correct for factors unrelated to abundance to standardize the South Atlantic SEAMAP data following methods similar to the GOM SEAMAP data. Covariates considered in this analysis that may have affected abundance include year, season, area, and sampling statistical zone. Time of day was not included as a covariate as data were discontinuous due to most participating vessels not conducting 24-hour operations. The abundance trend for this time series was flat with peaks in abundance of different magnitudes found every 5–10 years. The data showed high inter-annual variability in Caribbean electric ray catches in the survey, and catches were very low throughout, but there was no trend in the catch rates suggestive of a decline in Caribbean electric rays.

REEF Data

The REEF (*www.reef.org*) is a dataset that is composed of more than 100,000 visual surveys conducted by volunteer divers during their daily dive activities. This data set has been previously used for evaluating species abundance trends (*e.g.,* Ward-Paige *et al.* 2010 and references therein) and was referenced in the petition as evidence of the low occurrence of Caribbean electric rays along the east coast of Florida, the GOM, and the northwestern Caribbean.

The IUCN had cursorily reviewed 1994–2004 REEF data for apparent trends, but had not conducted a thorough analysis. Because these visual surveys vary in duration, location and diver skill level (experience, including experience in species identification), the SRT applied a generalized linear model to examine standardized rates of change in sighting frequency as an index of abundance. The SRT considered area as a covariate based on 8 major sampling areas from the REEF database: Gulf of Mexico, east coast of Florida, the Florida Keys, the Bahamas (including Turks and Caicos), and the northwestern Caribbean (including Cuba, the Cayman Islands, Jamaica, Haiti/Dominican Republic), Greater Antilles (Puerto Rico to Grenada), Continental Caribbean (Belize-Panama), and Netherland Antilles. The SRT also considered skill level of the diver (experienced or novice), the bottom type, year, season, water temperature and water visibility as covariates.

In the REEF database, Caribbean electric rays were observed on 476 out of 119,620 surveys (0.4 percent). Caribbean electric rays were observed throughout the survey area with sighting records averaging 10–18 percent of the total number of fish in the Antilles, Bahamas, Florida and Central America. Positive occurrences were lowest in the northwest Caribbean Sea and Gulf of Mexico. The average depth where diver sightings occurred was about 5 meters generally over a habitat where a diver recorded a variety of individual habitats. The final covariates included in the model were year, area and bottom type. The trend in number of occurrences was relatively flat and similar to the other data series that showed high fluctuation across years. Due to the low encounter rate, there was high uncertainty in the abundance trend.

The SRT found that relative abundance fluctuated dramatically between years, but found no trend. The final model selected contained year, area and bottom type as covariates with the trend in occurrences relatively flat with the number of encounters rapidly fluctuating over the time series.

State Agency Data

As noted earlier, the SRT sought additional datasets that were not included in the IUCN Red list Assessment or the petition. Fishery independent data sets with Caribbean electric ray records were obtained from Texas Parks and Wildlife Department (TPWD) and Florida Fish and Wildlife Research Institute (FFWRI). The North Carolina Department of Environment and Natural Resources (NCDENR) also provided the SRT with the 6 records it had from all of its fishery-dependent and -independent programs combined.

The TPWD fishery-independent nearshore Gulf trawl survey is the only TPWD program that catches *Narcine bancroftii* somewhat regularly. Trawl collections did not begin coast-wide until 1982 in bays and 1986 in the GOM. Trawl sampling in Sabine Lake began in January 1986, and in East Matagorda Bay in April 1987. The trawl sampling program began in the Texas Territorial Sea (within 16.7 kilometers (km) of shore) in 1984 off Port Aransas (24.1 km either side of each jetty) and was expanded to similar areas off the Sabine Pass, Galveston, Port O'Connor, and Port Isabel jetties in January 1986 (sampling off Port Isabel was restricted to 48.2 km north of the Rio Grande River) (Matlock 1992).

TPWD provided trawl data for the three Gulf areas that encounter Caribbean electric rays, *i.e.,* Aransas Pass, Matagorda, and Santiago Pass (Mark Fisher, TPFWD, pers. comm. to Jennifer Lee, NMFS SERO, July 31, 2014). Data from Aransas Pass and Matagorda show increases in abundance especially since early 2000. The trend in abundance for Santiago Pass increases until the late 1990s, then decreases to its original level at the start of the time series. Santiago Pass Caribbean electric ray catches were about 0.1/hour from 1985–1990, increased to 0.4/hour from 1991–2004, then declined back to 0.1/hour from 2005–present.

The FFWRI's fisheries independent monitoring program uses a stratified-random sampling design to monitor fish populations of specific rivers and estuaries throughout Florida. They use a variety of gears to sample, including small seines, large seines, and otter trawls. The program has long-term data sets for Apalachicola (since 1998), Cedar Key (since 1996), Tampa Bay (since 1989), and Charlotte Harbor (since 1989) along the GOM and Tequesta (since 1997) and Indian River Lagoon (since 1990) on the Atlantic Coast.

Despite the large geographic area sampled and the extensive sampling efforts over time, the FFWRI fisheries independent monitoring program has collected very few Caribbean electric rays to date (*i.e.,* 34 specimens). Of these, 13 Caribbean electric rays were collected from Apalachicola (*i.e.,* 2 per year in 1998, 2004, and 2012; 1 per year during 2000–2002 and 2006–2008, and 2010), 15 were collected from Cedar Key (1 per year during 2001–2002 and 2008, 5 in 2004, 2 per year in 2009 and 2012, and 3 in 2013); 4 were collected from Tequesta (2 in 1998, and 2 in 2009), and 1 was collected from each of Tampa Bay (1990) and Indian River Lagoon (1994). The SRT determined it was not appropriate to analyze these data points further due to the rarity of this species within their samples.

The SRT also considered the NCDENR data. The SRT determined it was not appropriate to analyze these data points further due to the extreme rarity of this species' occurrence (*i.e.,* 6 records) within their samples.

Shrimp Observer Program

The Southeast Fisheries Science Center, Galveston Laboratory, began placing at-sea observers on commercial shrimping vessels in 1992 in the U.S. southeastern region through a cooperative voluntary research effort. In July 2007, a mandatory Federal observer program was implemented to characterize the U.S. Gulf of Mexico penaeid shrimp fishery, and in June 2008, the mandatory program expanded to include the South Atlantic penaeid and rock shrimp fisheries. The program was initiated to identify and minimize the impacts of shrimp trawling on federally managed species. The specific objectives are to (1) estimate catch rates during commercial shrimping operations for target and non-target species, including protected species by area, season and depth; and (2) evaluate bycatch reduction devices designed to eliminate or significantly reduce non-targeted catch. During the voluntary research effort, several different projects were initiated. One project, referred to as a characterization, involved identifying all species in a subsample from one randomly selected net. In the mandatory shrimp observer program, there are approximately 30 species (common, federally managed, etc.) that are selected and subsampled from every sampled net, but other species, including Carribbean electric rays, are only grouped into broad categories (*e.g.,* crustaceans, inverts, finfish).

Data associated with commercial trawl bycatch of Caribbean electric rays (recorded as *Narcine brasiliensis*—Ray, Lesser Electric) in the eastern GOM and off the east coast of the United States were available from the characterization project conducted in 2001, 2002, 2005, and 2007. A total of 1,150 trawls were observed, and the catch was sorted in its entirety to the species level. Across all years, 28 Caribbean electric rays were captured during 4,016.6 hours of trawl effort, with 387 and 763 trawls being observed off the east coast and in the northern GOM, respectively. Due to the low occurrence of Caribbean electric rays, the SRT chose not to develop an index of abundance for this species from these data. The SRT believed the low number of animals captured across all years would make the index relatively uninformative. These data were evaluated in considering bycatch as a potential other manmade factor that may threaten the species.

Anecdotal Reports

In addition to the datasets reviewed above, the SRT found anecdotal accounts of Caribbean electric rays through various other sources. Many of these additional anecdotal accounts are from YouTube videos by beach goers or forum discussions by boaters and fishermen who encountered the species along the northern Gulf Coast. There are also anecdotal reports by divers around south Florida, along the Atlantic coast, and throughout parts of the Caribbean. A researcher at Auburn University provided anecdotal accounts of Caribbean electric rays along the Fort Morgan Peninsula in Alabama. The researcher observed large numbers of Caribbean electric rays during late summer to early fall over 3 years (2011–2013) of sampling in that particular area during that particular time of year (Dr. Ash Bullard, to Jennifer Lee, NMFS, pers. com, August 15, 2014). The most common anecdotal encounters are sightings. The sightings typically describe the number of Caribbean electric rays observed at one time as very abundant (*e.g.,* ''lots,'' ''everywhere''). One anecdote notes that when you know what to look for they can be seen everywhere. The SRT noted while these reports cannot be used to analyze trends in abundance, they illustrate that people continue to encounter the species in coastal areas around the GOM, South Atlantic, and Caribbean and that when they do the species appears to be locally abundant.

Conclusion

Based on all times series analyzed by the SRT, including those used to support the listing petition, the SRT found no evidence of a decline in Caribbean electric ray. Differences in reported trends are related to the more robust analysis used by the SRT in the status review. Moreover, the preliminary analyses in our 90-day finding used only ratio estimators, and we did not have the raw data to derive the confidence interval. No discernable trends in abundance of the Caribbean electric ray were detected in any of the three Gulf of Mexico SEAMAP indices or the South Atlantic SEAMP index. The SRT noted the number of encounters did dramatically fluctuate over each time series, but that it was not surprising based on the species' apparent clustered but patchy distribution over shallow, sandy habitats as documented repeatedly in the literature. As additional support for this characterization, the SRT noted that recent encounters documented through anecdotes indicate the Caribbean electric ray is fairly abundant in specific habitats while consistently absent from others. The SRT was unable to find any historical or current abundance information outside of U.S. waters for the Caribbean electric ray. A non-commercial species, there are no statistics on Caribbean commercial fishery catches or on efforts that would enable an assessment of the population.

Threats Evaluation

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

The SRT concluded that man-made activities that have the potential to impact shallow sandy habitats include dredging, beach nourishment, and shoreline hardening projects *(e.g.,* groins). These types of activities can negatively impact Caribbean electric rays by removing habitat features (*e.g.,* alteration or destruction of sand bars) and affecting prey species. For example, annelids that Caribbean electric rays prey on are killed or otherwise directly or indirectly affected by large dredge-and-fill projects (Greene 2002).

The SRT determined that coastal habitats in the United States are being impacted by urbanization. Coastal habitats in the southern United States, including both the areas along the Atlantic and GOM, have experienced and continue to experience losses due to urbanization. For example, wetland losses in the GOM region of the United States averaged annual net losses of 60,000 acres (24,281 hectares) of coastal and freshwater habitat from 1998 to 2004 (Stedman and Dahl 2008). Although wetland restoration activities are ongoing in this region of the United States, the losses outweigh the gains, significantly (Stedman and Dahl 2008). These losses have been attributed to commercial and residential development, port construction (*e.g.,* dredging, blasting, and filling activities), construction of water control structures, modification to freshwater inflows (*e.g.,* Rio Grande River in Texas), and oil and gas related activities.

The oil and gas industry may affect marine resources in a variety of ways, including increased vessel traffic, the discharge of pollutants, noise from seismic surveys, and decommissioning charges. Although routine oil and gas drilling activities generally occur outside of the known depth range of the species, miles of pipelines associated with oil and gas activities may run through Caribbean electric ray habitat. The SRT concluded that the effect or magnitude of effects on Caribbean electric ray habitat from oil and gas activities is unknown. The largest threat is the release of oil from accidental spills. While safety precautions are in place to prevent the probability of spills and to decrease the duration of spills, these events still occur. In the GOM, the Deepwater Horizon oil spill was an unprecedented disaster, both in terms of the area affected and the duration of the spill. The Deepwater Horizon incident resulted in injuries to a wide array of resources and habitat across the Northern Gulf of Mexico from Texas to Florida, including shoreline beaches and sediments, organisms that live on and in the sand and sediment, and fish and shellfish and other invertebrates that live in the water in nearshore ocean-bottom habitats (NOAA 2015, *http://www.gulfspillrestoration.noaa.gov/restoration-planning/gulf-plan/*). While there has been no production of oil along the Atlantic coast of the United States to date, there remains the possibility of production in the future.

The SRT reported on NOAA's Restoration Center's involvement in ongoing coastal restoration activities throughout the southeastern United States. In 2010, NOAA funded coastal restoration activities in Texas and Louisiana using appropriations from The American Recovery and Investment Act of 2009. In Louisiana, where 25 square miles (64.7 square kilometers) of wetlands are lost per year, funding from the Coastal Wetlands Planning, Protection and Restoration Act helps to implement large-scale wetlands restoration projects, including barrier island restoration and terrace and channel construction.

The SRT anticipated an increase in large-scale restoration projects in the GOM to mitigate the adverse effects of the Deepwater Horizon oil spill and foster restoration of coastal habitat, including those used by the Caribbean electric ray. Numerous large coastal restoration projects in the GOM are expected to be funded by the Resources and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act, Natural Resource Damage Assessment, and Clean Water Act settlement agreements related to the Deepwater Horizon oil spill. Many additional restoration projects will also be funded by the Gulf of Mexico Energy Security Act, beginning in Fiscal Year 2017.

While fewer in number, restoration efforts are also expected along coastal areas of the South Atlantic states. For example, funding is expected to be available to support comprehensive and cooperative habitat conservation projects in Biscayne Bay located in south Florida, as one of NOAA's three Habitat Focus Areas.

The SRT concluded the geographic areas in which the Caribbean electric ray occurs are being impacted by human activities. Despite ongoing and anticipated efforts to restore coastal habitats of the GOM and Atlantic off the Southeastern United States, coastal habitat losses will continue to occur in these regions as well as throughout the Caribbean electric ray's entire range. However, the SRT could find no information on specific effects to the Caribbean electric ray beyond broad statements on the impacts to coastal habitat resulting from development and oil and gas exploration. Data are lacking on impacts to habitat features related to the Caribbean electric ray and/or threats that result in curtailment of the Caribbean electric ray's range. In October 2015, NOAA published a Programmatic Damage Assessment and Restoration Plan (PDARP) and Draft Programmatic Environmental Impact Statement, which considers programmatic alternatives to restore natural resources, ecological services, and recreational use services injured or lost as a result of the Deepwater Horizon oil spill. The PDARP presents data on impacts to nearshore habitats and resources, but there are no data specific to Caribbean electric rays.

As discussed above, anthropogenic impacts to shallow, soft bottom habitats have been occurring for decades and are expected to continue into the future indefinitely. However, there is no available information that indicates that the Caribbean electric ray has been adversely affected by impacts to the coastal soft bottom habitats they prefer. Sand substrate is not limiting throughout the Caribbean electric ray's range, and the limited data available on the species' movements indicate they do travel between areas with suitable habitat. The SRT concluded that predictions of coastal habitat losses adversely impacting the Caribbean ray in the future would be speculative.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

The SRT details how McEachran and Carvalho (2002) reported for the Narcinidae family that ''flesh of the tail region may be marketed after removal of the electric organs in the larger species, but is generally considered to be mediocre in quality.'' The SRT notes that in the species-specific account for Caribbean electric ray, McEachran and Carvalho (2002) reported that ''the tail region may be consumed as food and considered of good quality, but it is not targeted regularly by fisheries in the Western Central Atlantic.''

The SRT found no evidence of commercial or recreational harvest of the species. Interest in the species by those who detect it in the surf zone is largely one of curiosity. As Caribbean electric rays are generally nocturnal and spend daylight hours buried under the sand, they likely go undetected by the general public. Recreational fishermen who are gigging for flounder at night are most likely to encounter this species. The SRT noted there are some anecdotal reports of recreational surf fishermen capturing them in dip-nets; however, available data indicate that captured individuals are released.

Scientific research on Caribbean electric rays has been sparse. Rudloe (1989a) collected and studied the ecology of Caribbean electric rays from March 1985 to March 1987, to assess the feasibility of its use in biochemical and neurophysiological research. Rudloe (1989a) reported catching 3,913 rays at several stations from Cape San Blas to Alligator Point, Florida, during this time period. Of these, 3,229 were retained, 455 were tagged and released, and 229 were released untagged due to small size. Funding for research was discontinued after these 2 years of sampling.

The SRT uncovered only a few additional studies involving the Caribbean electric ray that post-date the Rudloe study (Dean and Motta 2004a, b; Dean *et al.* 2005, 2006; Tao 2013). Dr. Mason Dean led a study on Caribbean electric ray husbandry (Dean *et al.* 2005) and three studies on jaw morphology and feeding behavior (Dean and Motta 2004a, b; Dean *et al.* 2006). For these studies, samples were collected using a trawl off Cape Canaveral on the east coast of Florida (41 individuals total) and in the northeast portion of the GOM (6 individuals); six individual specimens preserved at the Florida Museum of Natural History that had been collected from Little St. George Island, Florida were also used. Tao (2013), as a Ph.D. candidate at Auburn University, analyzed the blood vascular systems of ten Caribbean electric rays captured in the northern GOM off Alabama for bacteria. The Bullard Laboratory at Auburn University provided the samples for that study, subsequently releasing them alive after collecting external parasites (Dr. Ash Bullard, Auburn University pers. comm. to J. Lee, NMFS, August 15, 2014). Bullard Laboratory at Auburn University sampled an unknown number of additional Caribbean electric rays in accordance with its state collection permit; no record was kept of the number of Caribbean electric rays observed in the field or the total number of individuals examined. A few researchers from the GOM expressed interest in studying the species in the future, but the SRT did not uncover nor are we aware of any directed studies on Caribbean electric rays at this time.

Captive display of Caribbean electric rays in public aquaria is extremely rare. Due to their selective food habits (*i.e.,* live polychaete worms) and feeding behavior, they are not easy to keep in aquaria (Rudloe 1989b, Dean *et al.* 2005). The 2008 American Elasmobranch Society International Captive Elasmobranch Census documented two male electric rays and one female electric ray in captivity. They were recorded as *Narcine brasiliensis* and were in captivity at a single aquarium. The SRT was unable to determine if these animals were still in captivity or the location of this aquarium. Nevertheless this serves as the only record of electric rays in aquaria.

The Gulf Marine Specimens Laboratory sells 6–24 cm wild caught Caribbean electric rays for $126 (*http://www.gulfspecimen.org/specimen/fish/sharks-and-rays/*). However, no more than a few are sold annually, and the cost of collection and delivery greatly reduces the likelihood of their use as student specimens (Jack Rudloe pers. comm. to J. Lee, NMFS, August 15, 2014).

The species has apparent fidelity for specific, localized habitats, thus targeting Caribbean electric rays could adversely affect the population. However, the SRT found no information to indicate that commercial, recreational, scientific, or educational overutilization of Caribbean electric rays has occurred or is occurring. Further, based on the information presented above, the SRT did not expect overutilization by any specific industry in the future.

C. Competition, Disease and Predation

The available data reviewed by the SRT on competition for Caribbean electric ray prey species or other resources, and disease of and predation on Caribbean electric rays, are summarized in the Life History, Biology, and Ecology Section. The SRT found no information to indicate that competition for Caribbean electric ray prey species or other resources (*e.g.,* sandy substrate habitat) is negatively affecting the Caribbean electric ray abundance or survival. The SRT also found no information indicating that predation or disease is impacting Caribbean electric ray abundance and survival. Given the lack of data, the SRT concluded that predictions of whether competition, predation, or disease, may impact the Caribbean electric ray in the future would be entirely speculative.

D. Inadequacy of Existing Regulatory Mechanisms

The SRT evaluated this factor in terms of whether existing regulations may be inadequate to address potential threats to the species. The SRT concluded that although there were no species-specific regulations, there is no evidence that the lack of such is having a detrimental effect on the Caribbean electric ray.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

There are a variety of other natural and manmade factors that may affect the Caribbean electric ray and thus the continued existence of this species. Factors reviewed by the SRT included the species' life history and habitat use, natural events such as extreme tidal or red tide events, bycatch in commercial fisheries, and climate change.

Life History and Habitat Use

Rudloe (1989a) believed the species was potentially vulnerable to overharvest as a result of its low rate of reproduction and localized distribution. Caribbean electric rays reproduce annually (Rudloe 1989a, Moreno *et al.* 2010) with brood sizes ranging from 1–14 young (Bigelow and Schroeder 1953, de Carvalho *et al.* 1999, Moreno *et al.* 2010). While it is generally believed that elasmobranchs exhibit life history traits that make them more susceptible to exploitation (*e.g.,* low fecundity, late age of maturity, slow growth), the limited evidence on Caribbean electric ray life-history traits and population parameters (*e.g.,* mature by age 2, females reproduce every year) likely place the species among those elasmobranchs that are more productive. Therefore, the SRT did not consider the species to be vulnerable due to its rate of reproduction. The SRT did believe the species' patchy distribution and fidelity for specific habitats increases vulnerability, but they did not find evidence of this vulnerability having detrimental effects on the Caribbean electric ray. Thus they believed there was no basis to conclude these traits would increase extinction risk into the future.

Natural Events

Red tide (*Karenia brevis*) impacts many species of fish and wildlife in the GOM and along the Florida coast. *Karenia brevis* produces brevetoxins capable of killing fish, birds, and other marine animals. While red tide events can cause deaths of aquatic species, the SRT has no information on the extent to which red tides may be affecting the Caribbean electric ray. The SRT did not find any reports of red tide resulting in Caribbean electric ray mortalities.

There are a couple of reports of mass strandings of electric rays resulting from extremely low tides. The National Park Service at Padre National Seashore reported documenting a dozen or so dead electric rays in the tidal zone of Padre Island, Texas, after an extremely low tide event in the fall. Showing no signs of trauma or disease, officials at the National Park Service at Padre National Seashore attributed the mortalities to the extreme low tide leaving them stranded. The SRT concluded that such events have always occurred occasionally and are expected to continue to occur in the future without affecting overall population abundance.

Bycatch in Commercial Fisheries

Caribbean electric rays have been incidentally captured by commercial fisheries targeting other species, specifically those fisheries using trawl gear. The likelihood and frequency of exposure to bycatch in fisheries is generally a function of (1) the extent of spatial and temporal overlap of the species and fishing effort, and (2) the likelihood of an interaction resulting in capture and the extent of injury from capture.

As stated earlier, data associated with commercial trawl bycatch of Caribbean electric ray in the eastern GOM and off the east coast of the United States are available from the NMFS Observer Program. During 2001, 2002, 2005 and 2007, 1,150 trawls were observed and the catch was sorted in its entirety to the species level. Across all years, 28 Caribbean electric rays were captured during 4,016.6 hours of trawl effort. NMFS observed 387 trawls off the east coast and 763 trawls in the northern GOM over this time period. Trawl duration ranged from 0.1 to 11 hours (mean = 3.48 hours, S.D. = 1.41) and occurred at depths ranging from 0.6 to 71.1 m (mean = 15.08, S.D. = 9.04). In the combined areas there were 0.0070 individuals caught per hour of trawling. Examining area specific Caribbean electric ray catch rates, there were 0.0171 and 0.0015 individuals caught per hour off the east coast and in the GOM, respectively. For trawls with positive catch, there was no significant relationship between trawl duration and the number of individuals captured ($F = 0.01$, $P = 0.92$), consistent with what would be expected for a species with a patchy distribution. Based on the number of trawls associated with Caribbean electric ray captures ($n = 10$) and the total number of trawls observed ($n = 1150$), the probability of capturing Caribbean electric rays off the east coast and in the GOM is 0.0087 (C.V. = 0.3148).

Acevedo *et al.* (2007) reported on 99 shrimp trawls in the Caribbean Sea off the northern coast of Colombia from

August to November 2004. These trawls were conducted at depths ranging from 14–72 m. Elasmobranch fishes were captured in 30 of the 99 trawls, including 6 Caribbean electric rays. The six specimens were reported for the months of August and September, the only months in which the species was taken.

The SRT believes the capture of six Caribbean electric rays is likely the result of their patchy distribution and not reflective of overall Colombian fleet annual catch per unit of effort levels. The SRT noted that there are few areas of suitable habitat for the species off northern Colombia because the bottoms are rocky or coralline, and that this also makes most areas in that area unsuitable for trawling. Based on that information, the SRT concluded that it did not believe the documented bycatch is particularly notable or cause for concern.

The lack of sandy bottom habitat in northern Colombia could also mean that Caribbean electric rays and trawling effort may overlap more in that particular area. However, the SRT did not conclude that documented bycatch in Colombia raises concerns about the status of the species.

Overall, the SRT concluded there is no evidence that the bycatch of Caribbean electric ray occurring in U.S. or foreign fisheries, including the Colombia trawl fisheries, has had any past impact on Caribbean electric rays. Given that declines have not been documented in U.S. waters where data are available, there is no reason to suspect that declines are occurring elsewhere in the species' range. The SRT further found there is no basis to conclude that operations of these fisheries indefinitely into the future would result in a decline in Caribbean electric ray abundance.

Climate Change

The Intergovernmental Panel on Climate Change has stated that global climate change is unequivocal (IPCC 2007) and its impacts to coastal resources may be significant. There is a large and growing body of literature on past, present, and future impacts of global climate change induced by human activities, *i.e.,* global warming mostly driven by the burning of fossil fuels. Some of the likely effects commonly mentioned are sea level rise, increased frequency of severe weather events, and change in air and water temperatures. NOAA's climate change web portal provides information on the climate-related variability and changes that are exacerbated by human activities (*http://www.climate.gov/#understandingClimate*). The EPA's climate change Web page also provides basic background information on these and other measured or anticipated effects (*http://www.epa.gov/climatechange/index.html*).

The SRT concluded that climate change impacts on Caribbean electric rays cannot currently be predicted with any degree of certainty. Climate change can potentially affect the distribution and abundance of marine fish species. Distributional changes are believed to be highly dependent on the biogeography of each species, but changes in ocean temperature are believed likely to drive poleward movement of ranges for tropical and lower latitude organisms (Nye *et al.* 2009). Evidence of climate change-induced shifts in distribution of marine fish has been recorded in the western Atlantic, the Gulf of Mexico, and in the Northeastern Atlantic (Fodrie *et al.* 2010, Murawski 1993, Nye *et al.* 2009). The SRT predicts that increased water levels and warmer water temperatures will have little impact on the species and, if anything, could possibly expand its range off the U.S. east coast. Given what the SRT knows about the species' current depth distribution, the SRT concluded it is unlikely that sea level rise will have adverse effects. Similarly, because the range of the Caribbean electric ray seems to be restricted to warm temperate to tropical water temperature, the SRT concluded increased water temperatures are unlikely to negatively influence the species and could possibly expand their northern range in the future.

Extinction Risk Analysis

In addition to reviewing the best available data on potential threats to Caribbean electric rays, the SRT considered demographic risks to the species similar to approaches described by Wainwright and Kope (1999) and McElhany *et al.* (2000). The approach of considering demographic risk factors to help frame the discussion of extinction risk has been used in many status reviews (*http://www.nmfs.noaa.gov/pr/species*). In this approach, the collective condition of individual populations is considered at the species level, typically according to four demographic viability risk criteria: Abundance, population growth, spatial structure/connectivity, and diversity/resilience. These viability criteria reflect concepts that are well-founded in conservation biology and that individually and collectively provide strong indicators of extinction risk.

Because the information on Caribbean electric ray demographics and threats is largely sparse and non-quantitative, the SRT used qualitative reference levels for its analysis to the extent consistent with the best available information. The three qualitative 'reference levels' of extinction risk relative to the demographic criteria used were high risk, moderate risk, and low risk as defined in NMFS' Guidance on Responding to Petitions and Conducting Status Reviews under the ESA. A species or distinct population segment (DPS) with a high risk of extinction was defined as being at or near a level of abundance, productivity, spatial structure, and/or diversity that places its continued persistence in question. The demographics of a species or DPS at such a high level of risk may be highly uncertain and strongly influenced by stochastic or depensatory processes. Similarly, a species or DPS may be at high risk of extinction if it faces clear and present threats (*e.g.,* confinement to a small geographic area; imminent destruction, modification, or curtailment of its habitat; or disease epidemic) that are likely to create present and substantial demographic risks.

A species or DPS was defined as being at moderate risk of extinction if it is on a trajectory that puts it at a high level of extinction risk in the foreseeable future (see description of "High risk" above). A species or DPS may be at moderate risk of extinction due to projected threats or declining trends in abundance, productivity, spatial structure, or diversity.

A species or DPS was defined as being at low risk of extinction if it is not at moderate or high level of extinction risk (see "Moderate risk" and "High risk" above). A species or DPS may be at low risk of extinction if it is not facing threats that result in declining trends in abundance, productivity, spatial structure, or diversity. A species or DPS at low risk of extinction is likely to show stable or increasing trends in abundance and productivity with connected, diverse populations.

The SRT evaluated the current extent of extinction risk based on Caribbean electric ray relative abundance trends data and the likelihood the species will respond negatively in the future to potential threats. The foreseeable future is linked to the ability to forecast population trends. The SRT considered the degree of certainty and foreseeability that could be gleaned concerning each potential threat, whether the threat was temporary or permanent in nature, how the various threats affect the life history of the species, and whether observations concerning the species' response to the threat are adequate to establish a trend.

In evaluating the foreseeable future, it is not just the foreseeability of the threats, but also the foreseeability of the impacts of the threats on the species that must be considered. Thus, the nature of the data concerning each threat and the degree to which reliable predictions about their impacts on the species could be made were assessed. There are no data documenting discernable decreases in relative abundance trends or other data showing that Caribbean electric ray populations have been impacted by identified potential threats. The magnitude of potential threats and factors described above were generally expected to remain unchanged. Thus, the SRT determined it was unable to specify a definitive time frame to define the foreseeable future for evaluating the degree to which demographic factors and potential threats contribute to the species' risk of extinction.

Qualitative Risk Analysis of Demographics

The SRT's ability to analyze many of the specific criteria embedded in the risk definitions for demographic factors was limited. There are no data available on age-at maturity or natural mortality that would be necessary to determine population growth rates. Population structure and levels of genetic diversity in Caribbean electric rays are completely unknown, with no genetic studies ever conducted, even for the species' taxonomy.

The SRT determined that the relative abundance trend information for Caribbean electric rays represents a low risk to the species' continued existence now and into the future. The Caribbean electric ray has a broad range in warm temperate to tropical waters of the western Atlantic from North Carolina to Florida (its presence in the Bahamas is unknown, however), the Gulf of Mexico and the Caribbean Sea to the northern coast of South America. Within its range, it has a patchy distribution within relatively shallow waters, often within the surf zone. There are no estimates of absolute population size over the species' range; however, analyses of available long-term datasets indicate that the trend in relative abundance is relatively flat with abundance dramatically fluctuating over each time series. The SRT did not find this surprising given the patchy distribution over specific habitat types.

The SRT found very little information available on the life history of Caribbean electric ray. There are no age and growth studies for this species but anecdotal studies suggest rapid growth. Size at maturity for females is estimated at about 26 cm TL (Funicelli 1975). Caribbean electric rays are estimated to reach reproductive size by the end of their first year, and the reproductive cycle is annual (Rudloe 1989a). The brood size ranges from 1–14 depending on the study. While it is generally regarded that elasmobranchs exhibit life history traits (*e.g.,* low fecundity, late age of maturity, slow growth) that make them more susceptible to exploitation, the limited evidence on Caribbean electric ray life-history traits and population parameters likely place the species among those elasmobranchs that are more productive. Thus, the SRT believed that the species likely will be able to withstand moderate anthropogenic mortality levels and have a higher potential to recover from exploitation and stochastic events. The SRT concluded that available information on the species' demographic characteristics currently represent a low risk of extinction, and risks are unlikely to increase into the future.

The SRT found no evidence that Caribbean electric rays are at risk of extinction due to a change or loss of variation in genetic characteristics or gene flow among populations currently or into the future. This species is found over a broad range and appears to be opportunistic and well adapted to its environment. In addition, the risk of extinction due to the loss of spatial structure and connectivity for the Caribbean electric ray is low. Caribbean electric rays have a relatively broad distribution in the western Atlantic Ocean generally in habitats dominated by sand bottom substrate. Sand substrate is not limiting throughout the range, and the limited data available on species movements indicate individuals do travel between areas with suitable habitat.

Qualitative Risk Analysis of Threats

Regarding habitat threats to the species, the SRT concluded that man-made activities that have the potential to impact shallow sandy habitats include dredging, oil and gas pipelines and pipeline development, beach nourishment, and shoreline hardening projects (*e.g.,* groins). These types of activities could negatively impact Caribbean electric rays by removing habitat features they require. Although specific data are lacking on impacts to the Caribbean electric ray, it is reasonable to anticipate that coastal development will continue perpetually and may damage habitat within the species' range. However, the species does occur over a broad range and most impacts to the coastal zone have more significantly occurred to wetlands, coral reefs and mangrove ecosystems, rather than sand bottom habitats. For these reasons, the SRT concluded that the Caribbean electric ray is at low risk of extinction due to destruction and modification of habitat currently and in the future.

The SRT determined impacts from overutilization are unlikely to cause the species to be at heightened risk of extinction. There is little to no direct harvest for the species. The SRT considered bycatch in commercial fisheries as one of the natural or manmade factors it reviewed. Caribbean electric rays are very uncommon as bycatch in trawl and gillnet fisheries. Moreover, many states throughout their U.S. range (*e.g.,* Florida, Texas, and Georgia) have banned gillnet fishing in state waters which will further reduce the likelihood of bycatch as a negative impact on the continued existence of Caribbean electric rays. The level of bycatch from U.S. shrimp trawl fisheries is believed to be low primarily because they operate mainly in areas where Caribbean electric rays are not found. The SRT concluded that overutilization presented a low risk of extinction. The risk associated with the level of bycatch from U.S. shrimp trawl fisheries is unlikely to change in the future given the areas where the fishery mainly operates are also unlikely to change. Since 2001, there has been a dramatic decrease in otter trawl effort in southeast U.S. shrimp fisheries, which has been attributed to low shrimp prices, rising fuel costs, competition with imported products, and the impacts of 2005 and 2006 hurricanes in the Gulf of Mexico. Although otter trawl effort from year to year may fluctuate some, there are no data to indicate that otter trawl effort levels will increase in the future from recent levels. Also, the species has been subject to bycatch for centuries and does not appear to have experienced any measurable decline during those earlier periods, based on the relative abundance trends data available. The SRT also determined the risk to Caribbean electric ray from disease or predation is also low now; in the absence of data on past or current impacts to the species, the SRT concluded that no impacts can be foreseen into the future.

Overall Risk of Extinction Throughout Its Range Analysis

In this section we evaluate the overall risk of extinction to the Caribbean electric ray throughout its range. In determining the overall risk of extinction to the species throughout its range, we considered available data on the specific life history and ecology of the species, the nature of potential threats, any known responses of the species to those threats, and population abundance trends. We considered the information summarized in the status review report (Carlson *et al.* 2015).

The SRT determined it could not define a foreseeable future for their extinction risk. However, we think the available information on abundance trends can provide an appropriate horizon over which to consider how the species may respond to potential impacts into the future. The fisheries-independent datasets from which we evaluated abundance trends span time periods of 11 to 34 years, during which abundance trends were flat, with scattered and varied peaks in abundance. All of the potential threats evaluated by the SRT were occurring at the same time that the fishery independent surveys were performed. All of the activities that constitute potential threats were also projected by the SRT to continue at their current levels into the future. Therefore, we feel it is appropriate to consider the foreseeable future to be the next few decades, or 20 to 30 years, for Caribbean electric ray. Although the lifespan of Caribbean electric ray is not known, based on their early size of maturity and apparent annual reproduction, 20 to 30 years would encompass several generations of the species and thus any adverse responses to threats would be discernible over this timeframe.

We concur with the SRT's analysis and risk conclusions for potential threats and for demographic factors. The threat and demographic factors identified present either no risk or at most low risk to Caribbean electric ray, now and over the foreseeable future. There is no information indicating that any potential threats have adversely impacted Caribbean electric ray in the past, and there is no basis to predict that potential threats will adversely impact the species over the next 20 to 30 years. The species has not faced threats in the past, and is not expected to face any over the foreseeable future, that would result in declining trends in abundance, spatial structure, or diversity.

Based on all time series of data analyzed by the SRT, including those used to support the listing petition, there is no evidence of a decline in relative abundance of Caribbean electric rays. No discernable trends in abundance of Caribbean electric ray were detected in any of the available datasets. Number of encounters did dramatically fluctuate over each time series, but we believe this reflects the species' apparent clustered but patchy distribution over shallow, sandy habitats. Anecdotal accounts of recent encounters indicate they are abundant in specific habitats while consistently absent from others. Our 90-day determination that the petitioned action may be warranted due to impacts from incidental take in fisheries was based on one study (Shepherd and Myers 2005) indicating that nearshore shrimp trawl fisheries operating in the northern Gulf of Mexico may be negatively impacting the species in that region. However, further examination of the dataset by the SRT revealed that Shepherd and Myers (2005) did not take into account major changes in survey design and how they would affect the relative abundance of Caribbean electric rays, and did not understand how the catch was sorted, thus Shepherd and Myers (2005) underestimated the number of individual reports in the data. The SRT's analysis showed no discernable trends in abundance of Caribbean electric ray in any of the three Gulf of Mexico Southeast Area Monitoring and Assessment Program indices.

There is no evidence that potential threats comprising ESA section (4)(a)(1) factors (A)–(C) or (E) have contributed to heightened extinction risk and endangerment of the species. Incidental take in fisheries was the only activity we initially believed might be resulting in adverse impacts to the species due to the decline presented in Shepherd and Myers (2005). However, after further review we believe there is no evidence indicating that nearshore shrimp trawl fisheries operating in the northern Gulf of Mexico or in foreign waters (*e.g.,* Colombia shrimp trawls) are negatively impacting the species in those areas.

Neither we nor the SRT identified any threats under the other Section 4(a)(1) factors that may be causing or contributing to heightened extinction risk of this species. Therefore, we conclude that inadequate regulatory mechanisms (Section (4)(a)(1)(D)) are also not a factor affecting the status of Caribbean electric ray.

So to summarize, we did not find that any of the demographic factors or Section 4(a)(1) factors contribute significantly to the extinction risk of this species throughout its range, now or in the foreseeable future. Based on our consideration of the best available data, as summarized here and in Carlson *et al.* (2016), we determine that the present overall risk of extinction to the Caribbean electric ray throughout its range is low, and will remain low over the foreseeable future, and thus listing as threatened or endangered under the ESA throughout its range is not warranted. We also considered whether any threats or demographic factors elevated risks to the species when considered cumulatively. With no evidence of any decline in the species or other negative impacts to life history characteristics, there is no evidence to suggest that potential threats and demographic factors cumulatively are currently elevating the species' risk of extinction, or will elevate extinction risk throughout its range over the foreseeable future.

Significant Portion of Its Range (SPOIR)

Because we found that listing the species as endangered or threatened throughout its range was not warranted, we then conducted a ''significant portion of its range analysis.'' The U.S. Fish and Wildlife Service (FWS) and NMFS—together, ''the Services''—have jointly finalized a policy interpreting the phrase ''significant portion of its range'' (SPOIR) (79 FR 37578; July 1, 2014). The SPOIR policy provides that: (1) If a species is found to be endangered or threatened in only a significant portion of its range, the entire species is listed as endangered or threatened, respectively, and the Act's protections apply across the species' entire range; (2) a portion of the range of a species is ''significant'' if the species is not currently endangered or threatened throughout its range, but the portion's contribution to the viability of the species is so important that, without the members in that portion, the species would be in danger of extinction or likely to become so in the foreseeable future, throughout all of its range; and (3) the range of a species is considered to be the general geographical area within which that species can be found at the time we make any particular status determination.

We evaluated whether substantial information indicated that (i) portions of the Caribbean electric ray's range are significant and (ii) the species occupying those portions is in danger of extinction or likely to become so within the foreseeable future (79 FR 37578; July 1, 2014). Under the SPOIR policy, both considerations must apply to warrant listing a species as threatened or endangered throughout its range based upon its status within a portion of the range.

The historical range of the Caribbean electric ray is in western Atlantic shallow coastal waters, from North Carolina through the northern coast of Brazil (Carvalho *et al.* 2007). Individual populations are localized and do not migrate extensively, but do move onshore and offshore at least seasonally, crossing between barrier beach surf zones and sandbars adjacent to passes associated with estuarine barrier islands

(Rudloe 1989a). Movements also include travel east and west between sand bar habitats (Rudloe 1989a). Geographically as well as quantitatively, those parts of the electric ray's range that are within U.S. waters (Gulf of Mexico, South Atlantic) may each constitute a significant portion of the Caribbean electric ray's range because if the population were to disappear from either portion, it could result in the rest of the species being threatened or endangered. However, there is no information to indicate that the members of the species in either the Gulf of Mexico or the South Atlantic have different demographic viability or are facing different or more intense threats to the point where they would be threatened or endangered in these portions. Because a portion must be both significant and threatened or endangered before we can list a species based on its status in a significant portion of its range, we do not find that listing the Caribbean electric ray is threatened or endangered based on its status in a significant portion of its range is warranted.

Final Listing Determination

Section 4(b)(1) of the ESA requires that NMFS make listing determinations based solely on the best scientific and commercial data available after conducting a review of the status of the species and taking into account those efforts, if any, being made by any state or foreign nation, or political subdivisions thereof, to protect and conserve the species. We have independently reviewed the best available scientific and commercial information including the petitions, public comments submitted on the 90-day finding (79 FR 4877; January 30, 2014), the status review report (Carlson *et al.* 2015), and other published and unpublished information. We considered each of the statutory factors to determine whether it contributed significantly to the extinction risk of the species. As previously explained, we could not identify a significant portion of the species' range that is threatened or endangered. Therefore, our determination is based on a synthesis and integration of the foregoing information, factors and considerations, and their effects on the status of the species throughout its entire range.

We conclude that the Caribbean electric ray is not presently in danger of extinction, nor is it likely to become so in the foreseeable future throughout all of its range. Accordingly, the Caribbean electric ray does not meet the definition of a threatened species or an endangered species and our listing determination is that the Caribbean electric ray does not warrant listing as threatened or endangered at this time.

References

A complete list of all references cited herein is available upon request (see **FOR FURTHER INFORMATION CONTACT**).

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: July 18, 2016.

Samuel R. Rauch, III,

Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

[FR Doc. 2016–17397 Filed 7–21–16; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XE750

Mid-Atlantic Fishery Management Council (MAFMC); Public Meetings

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

ACTION: Notice of public meetings.

SUMMARY: The Mid-Atlantic Fishery Management Council (Council) will hold public meetings of the Council and its Committees.

DATES: The meetings will be held Monday, August 8, 2016 through Thursday, August 11, 2016. For agenda details, see **SUPPLEMENTARY INFORMATION**.

ADDRESSES: The meeting will be held at: Hilton Virginia Beach Oceanfront, 3001 Atlantic Avenue, Virginia Beach, VA 23451, telephone: (757) 213–3000.

Council address: Mid-Atlantic Fishery Management Council, 800 N. State St., Suite 201, Dover, DE 19901; telephone: (302) 674–2331.

FOR FURTHER INFORMATION CONTACT: Christopher M. Moore, Ph.D., Executive Director, Mid-Atlantic Fishery Management Council; telephone: (302) 526–5255. The Council's Web site, *www.mafmc.org* also has details on the meeting location, proposed agenda, webinar listen-in access, and briefing materials.

SUPPLEMENTARY INFORMATION: The following items are on the agenda, though agenda items may be addressed out of order (changes will be noted on the Council's Web site when possible.)

Monday, August 8, 2016

Executive Committee

The Executive Committee will hold a closed session and then open to review the letter regarding governance of summer flounder, scup, and black sea bass and coordination of research with SAFMC.

Unmanaged Forage Amendment Final Action

Review comments received during public hearings, review Ecosystem and Ocean Planning Advisory Panel and Committee recommendations for final action, and select preferred alternatives.

Ecosystem Approach to Fisheries Management (EAFM) Guidance Document

Review, finalize, and approve EAFM Guidance Document and review and discuss potential framework for integrating ecosystem interactions into fisheries assessment and management.

Tuesday, August 9, 2016

Demersal Committee Meeting as a Committee of the Whole With the Atlantic States Marine Fisheries Commission's Summer Flounder, Scup and Black Sea Bass and Bluefish Boards

Summer Flounder Allocation Project Report

A presentation will be received on the summer flounder allocation model and initial findings.

Summer Flounder Amendment Alternatives

Review and provide feedback on the list of amendment issues and Fishery Management Action Team recommendations.

Summer Flounder Specifications

Review SSC, Monitoring Committee, Advisory Panel, and staff recommendations regarding 2017–2018 specifications and recommend any changes if necessary.

Black Sea Bass Specifications

Review SSC, Monitoring Committee, Advisory Panel, and staff recommendations regarding 2017 specifications and recommend any changes if necessary.