

BUTTERFISH PEPRILUS TRICANTHUS



MID-ATLANTIC FISHERY MANAGEMENT COUNCIL (MAFMC) - ESSENTIAL FISH HABITAT (EFH) PROFILE

1. Management Unit

The management unit is all butterflyfish (*Peprilus tricanthus*) under U.S. jurisdiction.

2. Stock Status

The stock is not overfished and overfishing is not occurring based on the most recent stock assessment (2021). For current stock status: <https://www.fisheries.noaa.gov/national/status-stocks-reports>

3. Current Text Designations

Source: MAFMC. 2011. Amendment 11 to the Atlantic Mackerel, Squids, and Butterflyfish Fishery Management Plan. Available at: www.mafmc.org.

Eggs: EFH is pelagic habitats in inshore estuaries and embayments from Massachusetts Bay to the south shore of Long Island, New York, in Chesapeake Bay, and on the continental shelf and slope, primarily from Georges Bank to Cape Hatteras, North Carolina, as depicted in Figure 27 [section 4]. EFH for Atlantic butterflyfish eggs is generally found over bottom depths of 1,500 meters or less where average temperatures in the upper 200 meters of the water column are 6.5-21.5°C.

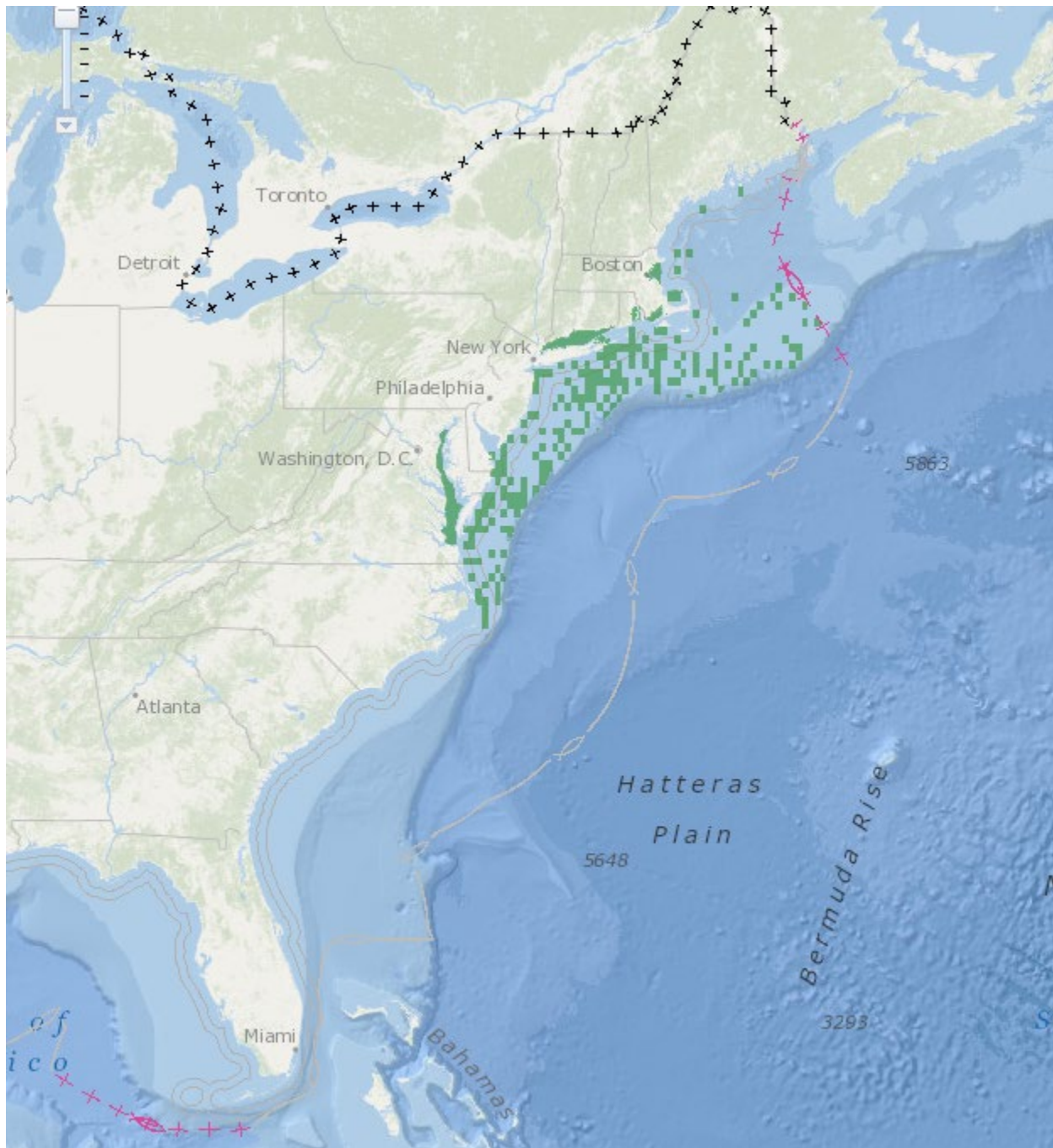
Larvae: EFH is pelagic habitats in inshore estuaries and embayments in Boston harbor, from the south shore of Cape Cod to the Hudson River, and in Delaware and Chesapeake bays, and on the continental shelf from the Great South Channel (western Georges Bank) to Cape Hatteras, North Carolina, as depicted in Figure 28 [section 4]. EFH for Atlantic butterflyfish larvae is generally found over bottom depths between 41 and 350 meters where average temperatures in the upper 200 meters of the water column are 8.5-21.5°C.

Juveniles: EFH is pelagic habitats in inshore estuaries and embayments from Massachusetts Bay to Pamlico Sound, North Carolina, in inshore waters of the Gulf of Maine and the South Atlantic Bight, and on the inner and outer continental shelf from southern New England to South Carolina, as depicted in Figure 29 [section 4]. EFH for juvenile Atlantic butterflyfish is generally found over bottom depths between 10 and 280 meters where bottom water temperatures are between 6.5 and 27°C and salinities are above 5 ppt. Juvenile butterflyfish feed mainly on planktonic prey.

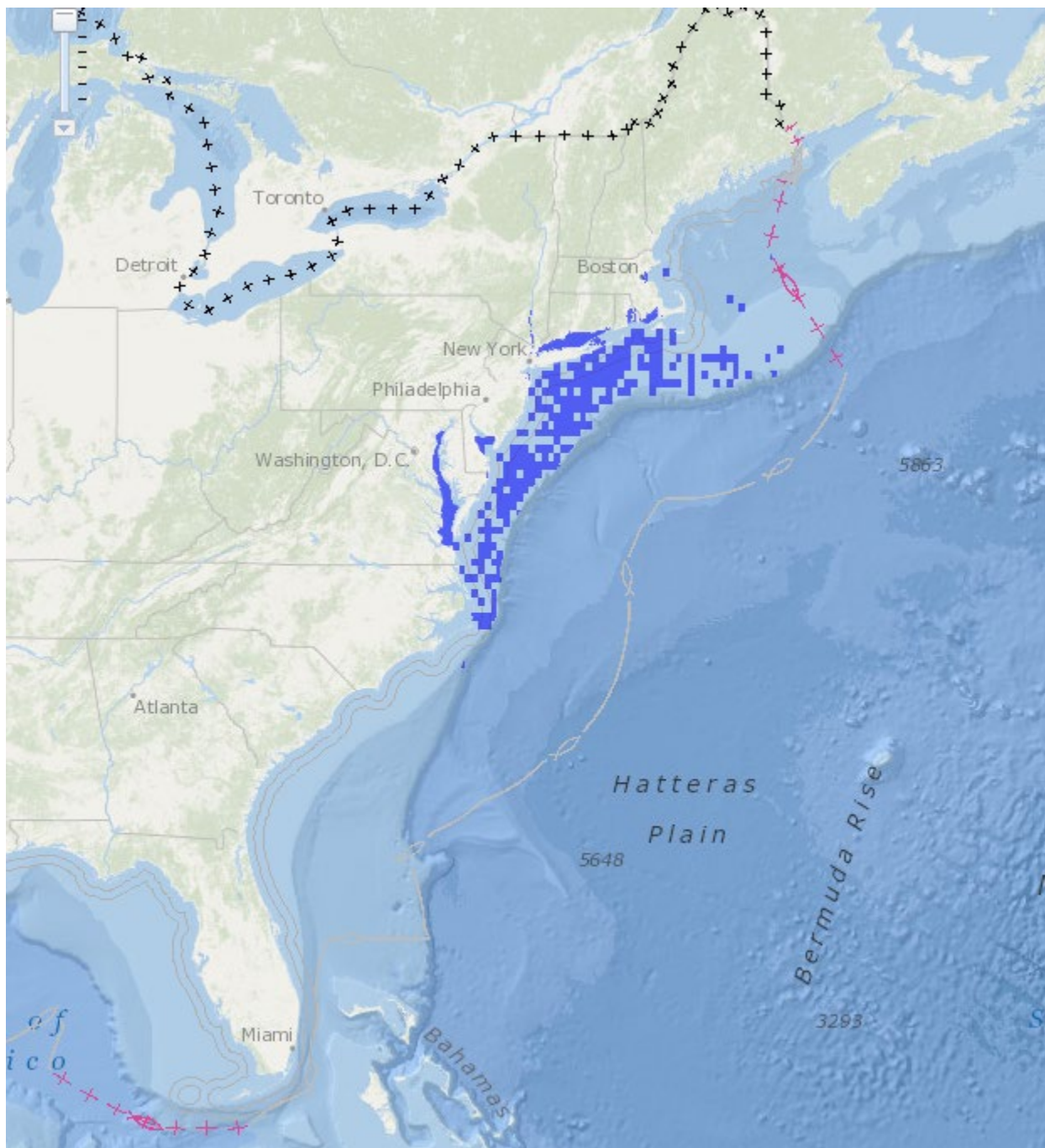
Adults: EFH is pelagic habitats in inshore estuaries and embayments from Massachusetts Bay to Pamlico Sound, North Carolina, inshore waters of the Gulf of Maine and the South Atlantic Bight, on Georges Bank, on the inner continental shelf south of Delaware Bay, and on the outer continental shelf from southern New England to South Carolina, as depicted in Figure 30 [section 4]. EFH for adult Atlantic butterflyfish is generally found over bottom depths between 10 and 250 meters where bottom water temperatures are between 4.5 and 27.5°C and salinities are above 5 ppt. Spawning probably does not occur at temperatures below 15°C. Adult butterflyfish feed mainly on planktonic prey, including squids and fishes.

4. Current Map Designations

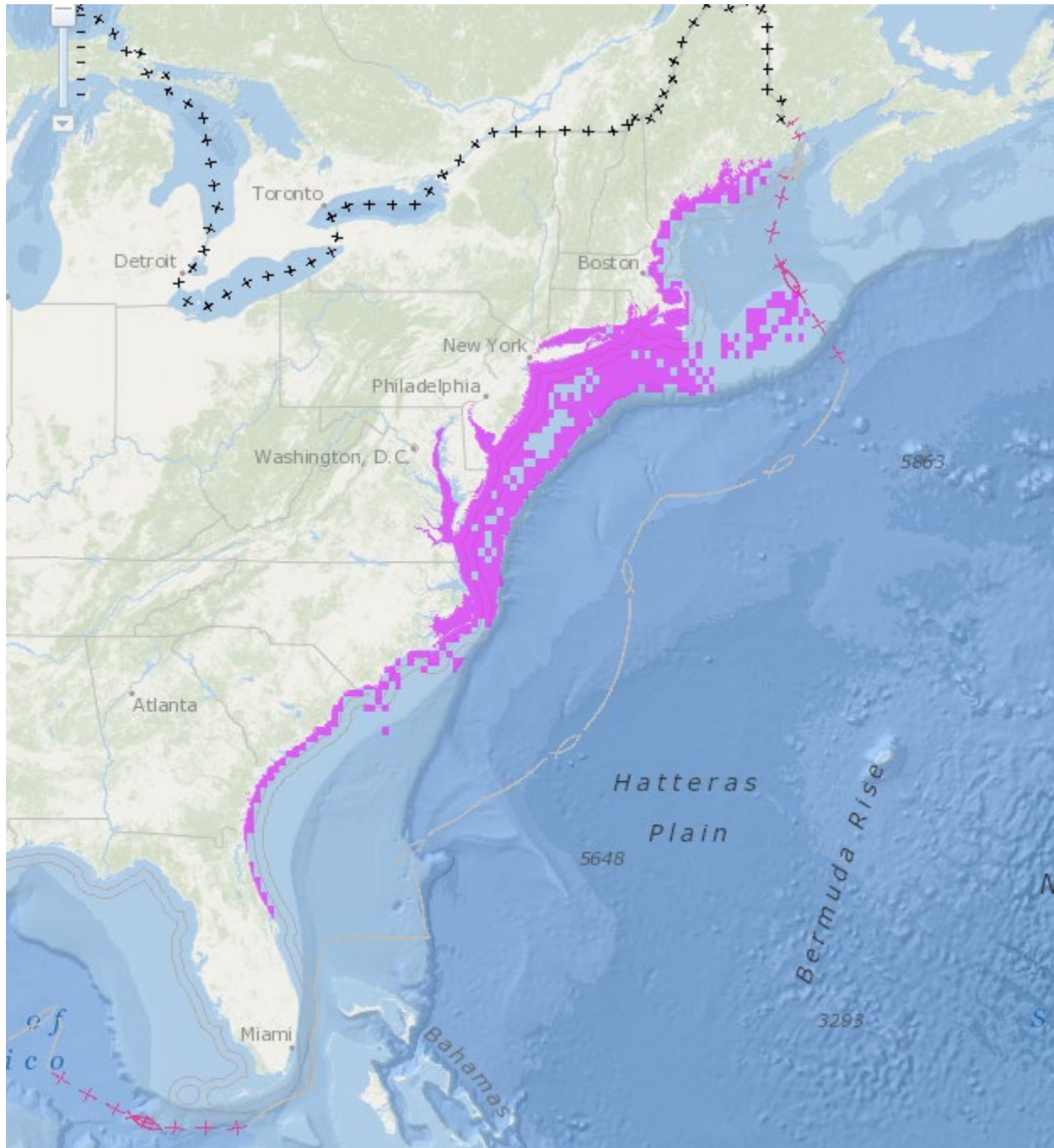
Eggs: Areas which encompass the top 95% of the areas where butterfish eggs were collected in the MARMAP surveys, 1977-1987, with nearshore areas described using ELMR data.



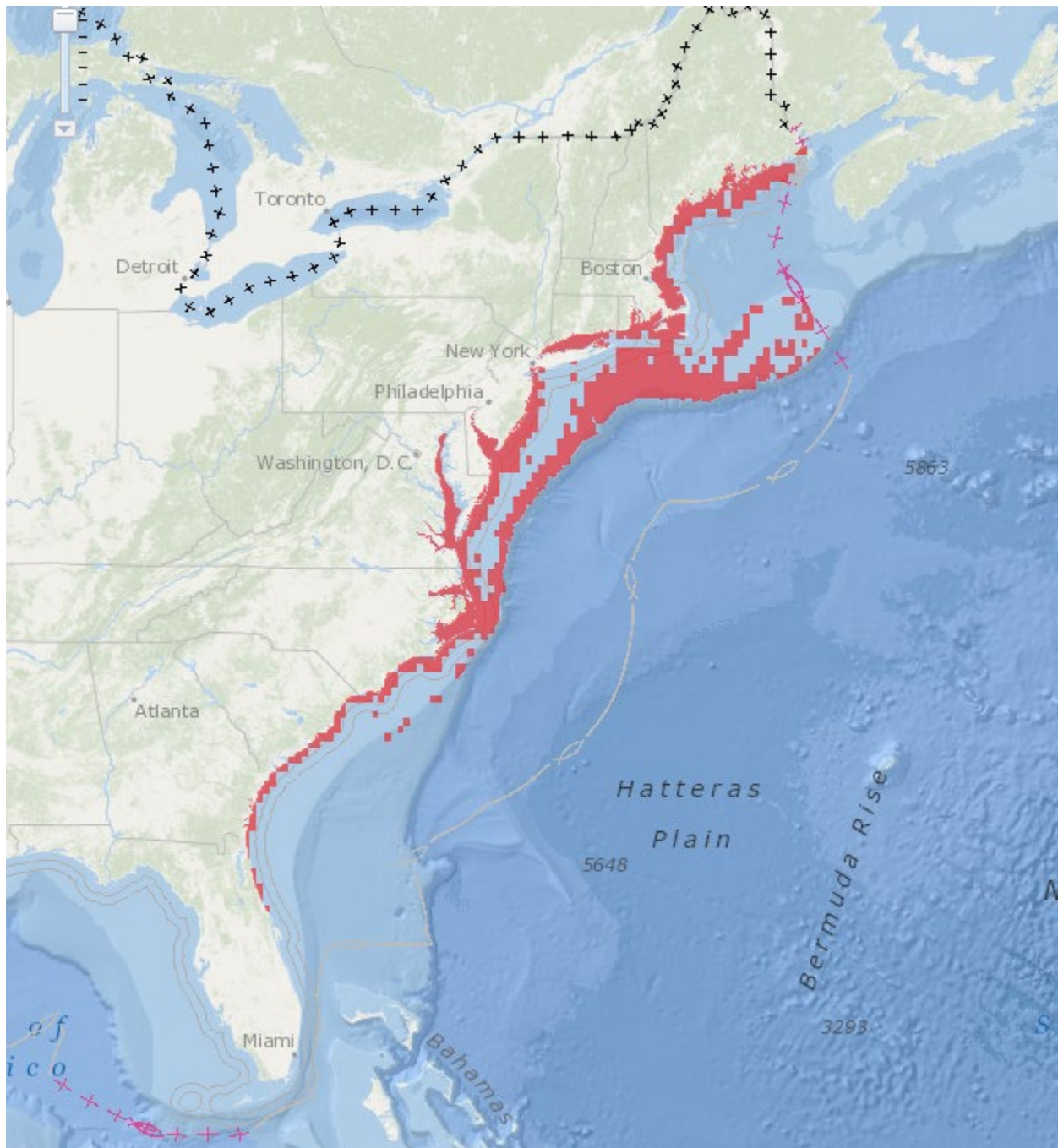
Larvae: Areas which encompass the top 95% of the areas where butterfish larvae were collected in the MARMAP surveys, 1977-1987, with nearshore areas described using ELMR data.



Juveniles: Areas which encompass the top 95% of the areas where butterfish juveniles were collected in the NEFSC trawl survey (1976-2007), and assorted state survey data.



Adults: Areas which encompass the top 95% of the areas where butterfish adults were collected in the NEFSC trawl survey (1976-2007), and assorted state survey data.



5. Designation and Mapping Methods

The Council has generally identified EFH using level 1 and/or level 2 data (see EFH regulations; section 7) primarily from distribution and relative abundance data from the Northeast Fisheries Science Center (NEFSC) bottom trawl surveys (spring and fall, 1963+), ichthyoplankton surveys (monthly, 1977+), information from species EFH source documents (technical memos) developed by NEFSC staff, and - for some inshore areas - a resource inventory conducted by NOAA's Estuarine Living Marine Resources Program (ELMR; 1994). The Mid-Atlantic EFH Technical Team, NEFSC scientists, and other experts developed alternatives for the Council to consider. Four alternatives were proposed and, for mapping purposes, the Council selected the alternative that used a distributional percentage (50%, 75%, 90%, or 100% of observations) of the catches by area based on which level of information was available and stock status. EFH maps were developed for each life stage and displayed the distribution and abundance data by ten-minute square areas (TMSQ). The designations were comprised of a detailed text description and a series of maps by TMSQ.

Butterfish EFH was first identified through Amendment 8 (1999). At the time, butterfish were not overfished; therefore, the Council selected the TMSQ where the highest 75% of the total catch was collected. Amendment 11 (2011) reviewed and updated EFH descriptions and maps. At that time, the overfished status of butterfish was unknown. The EFH review was completed using data from fishery-independent surveys, and new scientific literature. For the first time, maps included TMSQ where 10% or more of the bottom trawl tows from coastal state surveys in the region caught the life stages/species. In federal waters, the Council selected the TMSQ where the highest 95% of the total catch was collected. EFH for pelagic eggs and larvae were still mapped using the ichthyoplankton survey data and the inshore ELMR areas were retained in all maps.

6. EFH Source Documents

Information on butterfish habitat requirements can be found in:

Cross J.N., Zetlin C.A., Berrien P.L., Johnson D.L., McBride C. 1999. Essential Fish Habitat Source Document: Butterfish, *Peprilus triacanthus*, Life History and Habitat Characteristics. NOAA Technical Memorandum, NMFS-NE-145. Available at: <http://www.nefsc.noaa.gov/nefsc/habitat/efh/>.

7. Other Information

EFH Legal Authorities

EFH from Magnuson Stevens Act:

<http://www.fisheriesforum.org/HigherLogic/System/DownloadDocumentFile.ashx?DocumentFileKey=014976d6-5bc1-f0c4-be6b-ade7c99fc932&forceDialog=0>

EFH Contents of Fishery Management Plans under CFR §600.815:

<https://www.gpo.gov/fdsys/pkg/CFR-2013-title50-vol12/pdf/CFR-2013-title50-vol12-sec600-815.pdf>

Federal agency consultation with the Secretary under CFR §600.920:

<https://www.gpo.gov/fdsys/pkg/CFR-2014-title50-vol12/pdf/CFR-2014-title50-vol12-sec600-920.pdf>

NMFS 2006 EFH Guidance:

<http://www.nmfs.noaa.gov/op/pds/documents/03/201/03-201-15.pdf>

Management and Stock Assessments

MAFMC: <http://www.mafmc.org>

ASMFC: <http://www.asmfc.org>

NEFSC Stock Assessments: <http://www.nefsc.noaa.gov/saw/>