

## Regional EFH Profile: Mid-Atlantic

*This document was prepared by the Fisheries Leadership & Sustainability Forum with input from council and NOAA Fisheries staff as briefing material for the National Essential Fish Habitat Summit, May 17-19, 2016.*

### Summary

The Mid-Atlantic Fishery Management Council (Council) identifies and describes Essential Fish Habitat (EFH) by Fishery Management Plan (FMP), using a similar process for each plan. The Council completed initial EFH text designations and descriptive maps for most FMPs by 2001, and has completed reviews and updates for four FMPs since. EFH is identified by species and life stage using level 1 and 2 data from multiple sources. The Council is conducting a project focused on strengthening existing habitat authorities/tools to address threats to fish habitat more effectively, and recently began a review of all EFH components for all Council managed species. The original designations (pre-2001) are still in effect for bluefish, Atlantic surfclams, ocean quahogs, summer flounder, black sea bass, and scup.

### EFH timeline

Year	Action
1999	EFH identified for the Bluefish FMP (Amendment 1), Atlantic Mackerel, Squid (longfin <sup>1</sup> and <i>Illex</i> ), and Butterfish FMP (Amendment 8), Atlantic Surfclam and Ocean Quahog FMP (Amendment 12), Summer Flounder, Scup, and Black Sea Bass FMP (Amendment 12), and Spiny Dogfish FMP (original FMP)
2001	EFH identified for the Tilefish FMP (original FMP)
2008	EFH identified for longfin eggs (Amendment 9 to the Atlantic Mackerel, Squid (longfin and <i>Illex</i> ) and Butterfish FMP)
2009	EFH updated for the Tilefish FMP (Amendment 1)
2011	EFH updated for the Atlantic Mackerel, Squid (longfin and <i>Illex</i> ), and Butterfish FMP (Amendment 11)
2014	EFH updated for the Spiny Dogfish FMP (Amendment 3)

### EFH identification and review

The Council identified EFH using level 1 and/or level 2 data 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). Additional broadly-defined (level 1) areas south of Cape Hatteras and on the continental slope were added to maps for larvae and juveniles. The EFH process was developed for bluefish, and then applied to other individual FMPs. The designations were

<sup>1</sup> Due to a scientific name change, *Loligo* squid is now referred to as longfin squid.

comprised of a detailed text description and a series of maps by ten-minute square areas (TMSQ).

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.<sup>2</sup> EFH maps were developed for each life stage and displayed the distribution and abundance data by TMSQ. The Bluefish FMP was the first plan amended (Amendment 1; 1999) to meet the EFH requirements. Because bluefish were overfished at the time, the Council was more inclusive and risk averse and identified EFH by life stage as the highest 90% of the TMSQ where bluefish were present. Specific outcomes, additional data sources, and implementation of this approach for other FMPs are described below.

#### *Atlantic mackerel, squid (longfin and Illex), and butterfish*

EFH was first identified for all species and life stages (except longfin eggs) through Amendment 8 (1999). These species were not overfished; therefore, the Council selected the TMSQ where the highest 75% of the total catch were collected for all four species. Amendment 9 (2008) identified EFH for longfin eggs, and Amendment 11 (2011) reviewed and updated EFH descriptions and maps for all other life stages/species. EFH for longfin eggs, which attach to the seafloor, was mapped based on reported catches of eggs by trawlers. The EFH review was completed using data from fishery-independent surveys, new scientific literature, and revised EFH source documents. 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 chose to use the densest survey catches (90% of the TMSQ, or 95% for unknown or overfished species). EFH for the pelagic eggs and larvae were still mapped using the ichthyoplankton survey data and the inshore ELMR areas were retained in all maps. Revised fishing impact analyses were completed in Amendments 9 and 11.

#### *Atlantic surfclam and ocean quahog*

Amendment 12 to the Atlantic Surfclam and Ocean Quahog FMP (1999) identified EFH by species and life stage. Descriptions and maps were based on information from the NEFSC clam dredge survey and EFH source documents. The Council used 90% of the TMSQ where surfclams and ocean quahogs were collected in order to be more inclusive and risk averse.

#### *Summer flounder, scup, and black sea bass*

The Council identified EFH for summer flounder, scup, and black sea bass through Amendment 12 (1999) using NEFSC trawl surveys (spring and fall) and the ELMR program. The Council considered using 100% of the TMSQ as EFH since summer flounder, scup, and black sea bass have specific associations with benthic habitats types, and were also as significantly overfished at the time. However, they chose the 90% of the TMSQ for all life stages and species since it was

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<sup>2</sup> The EFH Technical Team and bluefish experts provided guidance for determining the appropriate threshold: 1) If only level 1 information is available, the Council should identify 100% of the area where the species occurs as EFH to be risk averse, 2) If level 2 information and species is overfished, the Council should identify 90% of the area, 3) If level 2 information and the species is not overfished, the Council should identify 75% of the area, and 4) Identifying 50% of the area would be more risk averse.

risk-averse and level 2 information was available. Amendment 12 also identified areas with submerged aquatic vegetation as Habitat Areas of Particular Concern (HAPC) for juvenile and adult summer flounder.

### *Spiny dogfish*

In the Spiny Dogfish FMP (1999), EFH was identified as the highest 90% of the TMSQ for all life stages in order to be inclusive and risk averse, since spiny dogfish were overfished at that time. Amendment 3 (2014) reviewed and updated EFH for all life stages. This EFH review used new scientific data from sampling programs including the NEFSC trawl survey, the coastal Northeast Area Monitoring and Assessment (NEAMAP) survey, and state surveys. Due to the different sex and size-specific life history stages of spiny dogfish, which occupy different habitats throughout the year, the revised designations applied to juveniles, sub-adults, and adults of both sexes, which results in five distinct life stages. The Council used 90% of the TMSQ for federal waters (geometric mean), and where dogfish occurred greater than 10% of the time in state waters. Amendment 3 also updated the evaluation of effects of fishing and non-fishing activities on dogfish EFH.

### *Tilefish*

The Tilefish FMP (2001) identified EFH for golden tilefish by life history stage and considered data on the distribution of commercial landings. EFH was identified based on temperature and depth regimes, instead of a distributional percentage of TMSQ, since the trawl survey data was biased low because tilefish can avoid trawls in their burrows. The FMP also identified HAPC for tilefish, but no habitat protections were adopted at the time. EFH was identified as:

*“...all offshore waters over the Continental Shelf and Slope with water depths from 250 to 1200 feet, from the United States/Canadian boundary to the Virginia/North Carolina boundary.” (MAFMC 2001).*

Amendment 1 (2009) revised EFH descriptions and maps to include a more refined depth range and descriptions of the types of benthic substrate used on the outer continental shelf and slope. The updates were based on scientific information about preferred temperature and depth ranges. Amendment 1 updated the fishing impacts evaluation, designated HAPC between 100 and 300 meters within four canyons where outcrops of semi-lithified clay are known to be present (because tilefish live in burrows made with clay), and established gear restricted areas to protect these outcrops from damage by bottom trawls.

### **Habitat project and initiatives**

The Council is conducting a habitat project to improve how they address regional habitat issues. This project includes developing overarching fish habitat goals and objectives. One piece of the habitat pilot project is completed: a series of policy documents that outline the Council's positions on five anthropogenic activities that threaten fish habitat. The Council is currently working on developing policies that focus on fishing impacts to fish habitat. The Council's Ecosystem and Ocean Planning (EOP) Committee coordinated the development of policy documents. The Council is reviewing its EFH designations, and collaborating with scientists from NOAA Fisheries and other agencies to develop new definitions by bringing new habitat science into the process.

### **EFH consultations**

EFH consultations are conducted by NOAA Fisheries Greater Atlantic Regional Fisheries Office staff. The Council is notified of upcoming opportunities to comment, and may comment on projects that could impact EFH and has created a series of habitat policies for anthropogenic activities such as offshore energy development and coastal development. By clearly communicating its positions on these activities, the Council can more effectively comment and collaborate with partners and other agencies to address these threats.

### **Looking ahead**

Regional scientists are in the process of developing the EFH Geodatabase project, which will integrate state and federal trawl survey data and create a web-based mapping and data analysis tool that is designed to automate the production of EFH maps for the New England and Mid-Atlantic councils. This database will give federal and state scientists and managers additional flexibility to process, query and use data in different ways to test different EFH mapping methods and develop EFH designations, and could also provide data to feed into habitat and assessment modeling processes.