

Essential Fish Habitat Description

American plaice (*Hippoglossoides platessoides*)

In its *Report to Congress: Status of the Fisheries of the United States* (September 1997), NMFS determined American plaice is currently overfished. This determination is based on the fishing mortality rate. Essential Fish Habitat for American plaice is described as those areas of the coastal and offshore waters (out to the offshore U.S. boundary of the exclusive economic zone) that are designated on Figures 6.1 - 6.4 and in the accompanying table and meet the following conditions:

Eggs: Surface waters of the Gulf of Maine and Georges Bank as depicted in Figure 6.1. Generally, the following conditions exist where most American plaice eggs are found: sea surface temperatures below 12° C, water depths between 30 and 90 meters and a wide range of salinities. American plaice eggs are observed all year in the Gulf of Maine, but only from December through June on Georges Bank, with peaks in both areas in April and May.

Larvae: Surface waters of the Gulf of Maine, Georges Bank and southern New England as depicted in Figure 6.2. Generally, the following conditions exist where most American plaice larvae are found: sea surface temperatures below 14° C, water depths between 30 and 130 meters and a wide range of salinities. American plaice larvae are observed between January and August, with peaks in April and May.

Juveniles: Bottom habitats with fine-grained sediments or a substrate of sand or gravel in the Gulf of Maine as depicted in Figure 6.3. Generally, the following conditions exist where most American plaice juveniles are found: water temperatures below 17° C, depths between 45 and 150 meters and a wide range of salinities.

Adults: Bottom habitats with fine-grained sediments or a substrate of sand or gravel in the Gulf of Maine and Georges Bank as depicted in Figure 6.4. Generally, the following conditions exist where most American plaice adults are found: water temperatures below 17° C, depths between 45 and 175 meters and a wide range of salinities.

Spawning Adults: Bottom habitats of all substrate types in the Gulf of Maine and Georges Bank as depicted in Figure 6.4. Generally, the following conditions exist where most spawning American plaice adults are found: water temperatures below 14° C, depths less than 90 meters and a wide range of salinities. Spawning begins in March and continues through June.

All of the above EFH descriptions include those bays and estuaries listed on the following table, according to life history stage. The Council acknowledges potential seasonal and spatial variability of the conditions generally associated with this species.

EFH Designation of Estuaries and Embayments
American plaice (*Hippoglossoides platessoides*)

Estuaries and Embayments	Eggs	Larvae	Juveniles	Adults	Spawning Adults
Passamaquoddy Bay	S	S	m,s	S	S
Englishman/Machias Bay	S	S	m,s	S	S
Narraguagus Bay	S	S	m,s	S	S
Blue Hill Bay	S	S	m,s	S	S
Penobscot Bay	S	S	m,s	S	S
Muscongus Bay	S	S	m,s	S	S
Damariscotta River	S	S	m,s	S	S
Sheepscot River	S	S	m,s	S	S
Kennebec / Androscoggin Rivers	S	S	m,s	S	S
Casco Bay	S	S	m,s	S	S
Saco Bay	S	S	S	S	S
Wells Harbor					
Great Bay					
Merrimack River					
Massachusetts Bay	S	S	S	S	S
Boston Harbor	S	S	S	S	S
Cape Cod Bay	S	S	S	S	S
Waquoit Bay					
Buzzards Bay					
Narragansett Bay					
Long Island Sound					
Connecticut River					
Gardiners Bay					
Great South Bay					
Hudson River / Raritan Bay					
Barnegat Bay					
Delaware Bay					
Chincoteague Bay					
Chesapeake Bay					

S ≡ The EFH designation for this species includes the seawater salinity zone of this bay or estuary (salinity > 25.0‰).

M ≡ The EFH designation for this species includes the mixing water / brackish salinity zone of this bay or estuary (0.5 < salinity < 25.0‰).

F ≡ The EFH designation for this species includes the tidal freshwater salinity zone of this bay or estuary (0.0 < salinity < 0.5‰).

These EFH designations of estuaries and embayments are based on the NOAA Estuarine Living Marine Resources (ELMR) program (Jury *et al.* 1994; Stone *et al.* 1994). For a detailed view of the salinity zone boundaries, as described in the ELMR reports, please see Appendix B. The Council recognizes the spatial and temporal variability of estuarine and embayment environmental conditions generally associated with this species.

Essential Fish Habitat
American plaice (*Hippoglossoides platessoides*) Eggs

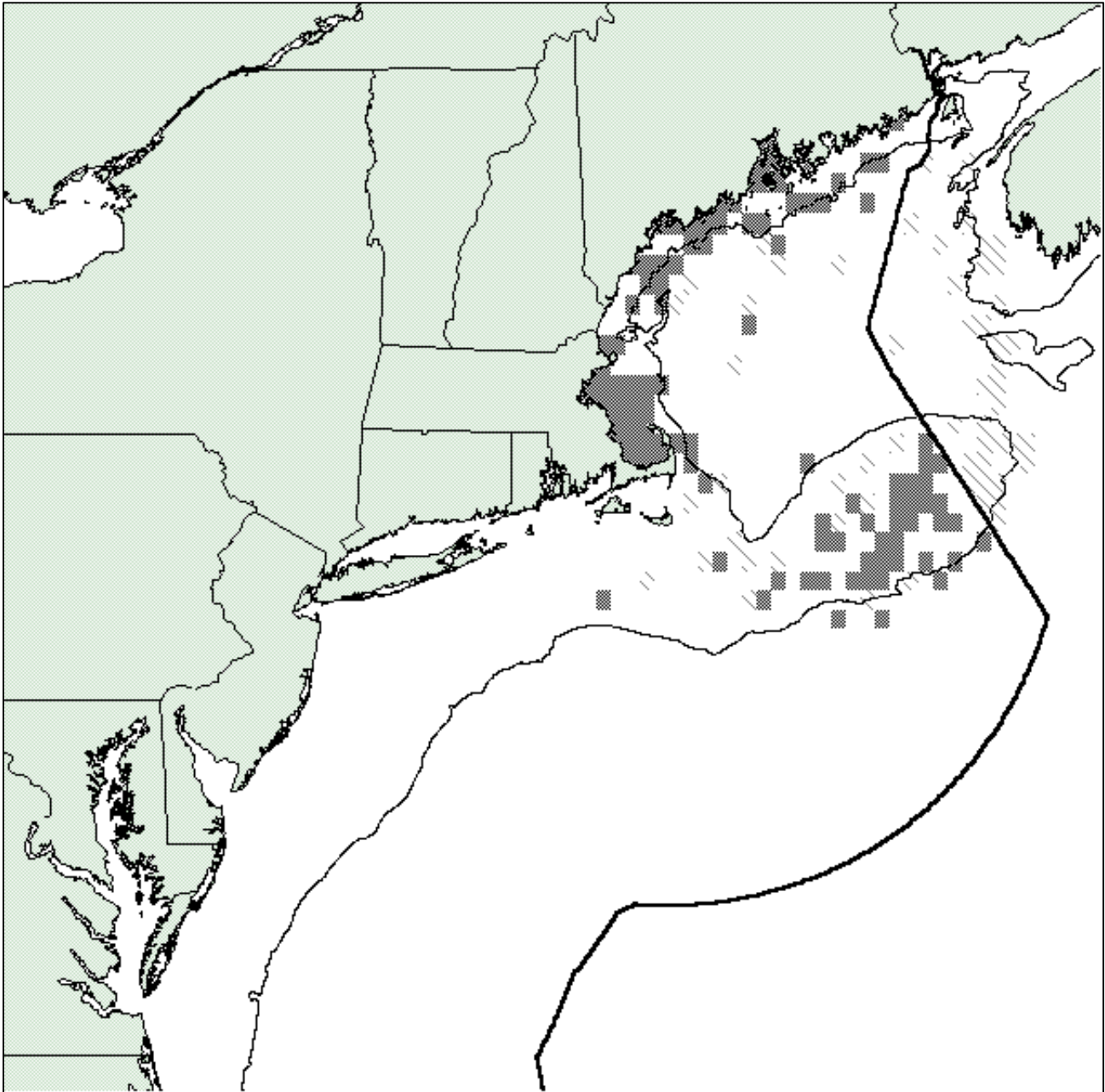


Figure 6.1: The EFH designation for American plaice eggs is based upon alternative 2 for American plaice eggs. This designation also includes those bays and estuaries identified by the NOAA ELMR program as supporting American plaice eggs at the "common" or "abundant" level. This alternative was selected to represent those areas most important to American plaice spawning and egg survival, while not including those areas where American plaice eggs occurred in relatively low concentrations. The light shading represents the entire observed range of American plaice eggs.

Essential Fish Habitat
American plaice (*Hippoglossoides platessoides*) Larvae

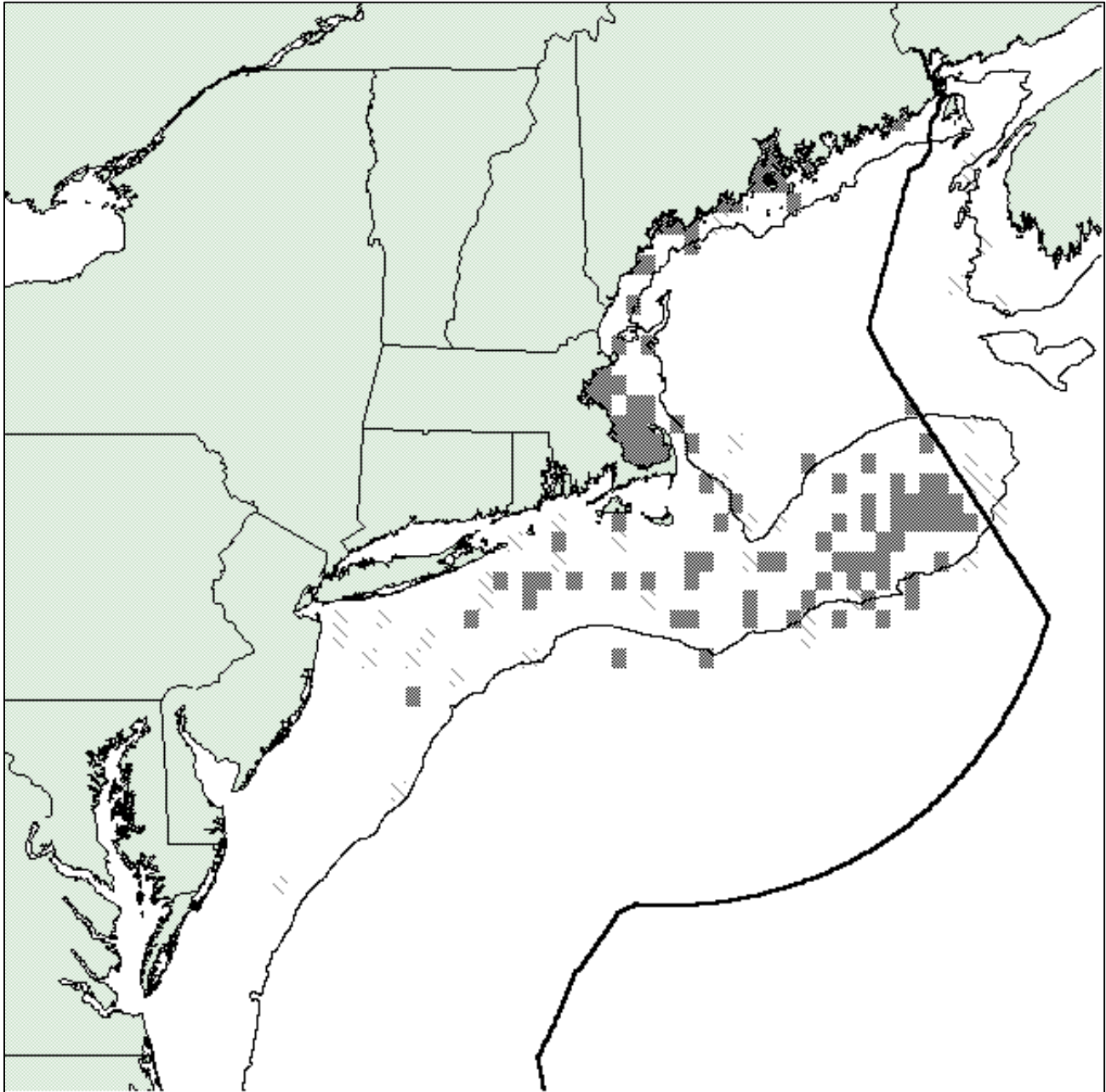


Figure 6.2: The EFH designation for American plaice larvae is based upon alternative 2 for American plaice larvae. This designation also includes those bays and estuaries identified by the NOAA ELMR program as supporting American plaice larvae at the "common" or "abundant" level. This alternative was selected to represent those areas most important to American plaice spawning and larval survival, while not including those areas where American plaice larvae occurred in relatively low concentrations. The light shading represents the entire observed range of American plaice larvae.

Essential Fish Habitat
American plaice (*Hippoglossoides platessoides*) Juveniles

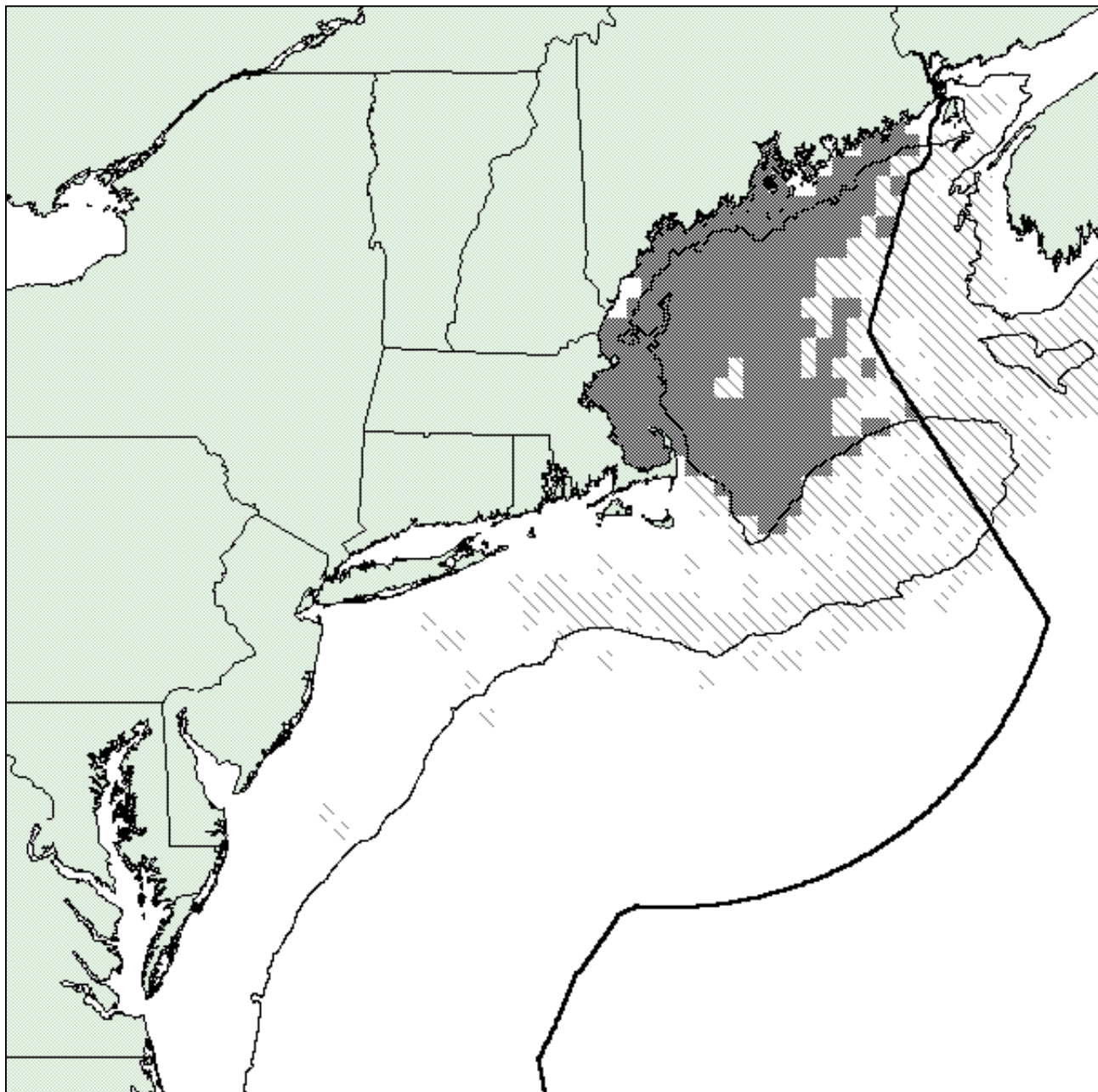


Figure 6.3: The EFH designation for juvenile American plaice is based upon alternative 3 for American plaice juveniles. The EFH designations also include the areas identified by the fishing industry and the inshore surveys as important for American plaice juveniles, as well as those bays and estuaries identified by the NOAA ELMR program as supporting American plaice juveniles at the "common" or "abundant" level. This designation was selected to include the areas where American plaice are most abundant, given that they are most concentrated in the Gulf of Maine and occur in relatively low concentrations on Georges Bank. The light shading represents the entire observed range of juvenile American plaice.

Essential Fish Habitat
American plaice (*Hippoglossoides platessoides*) Adults

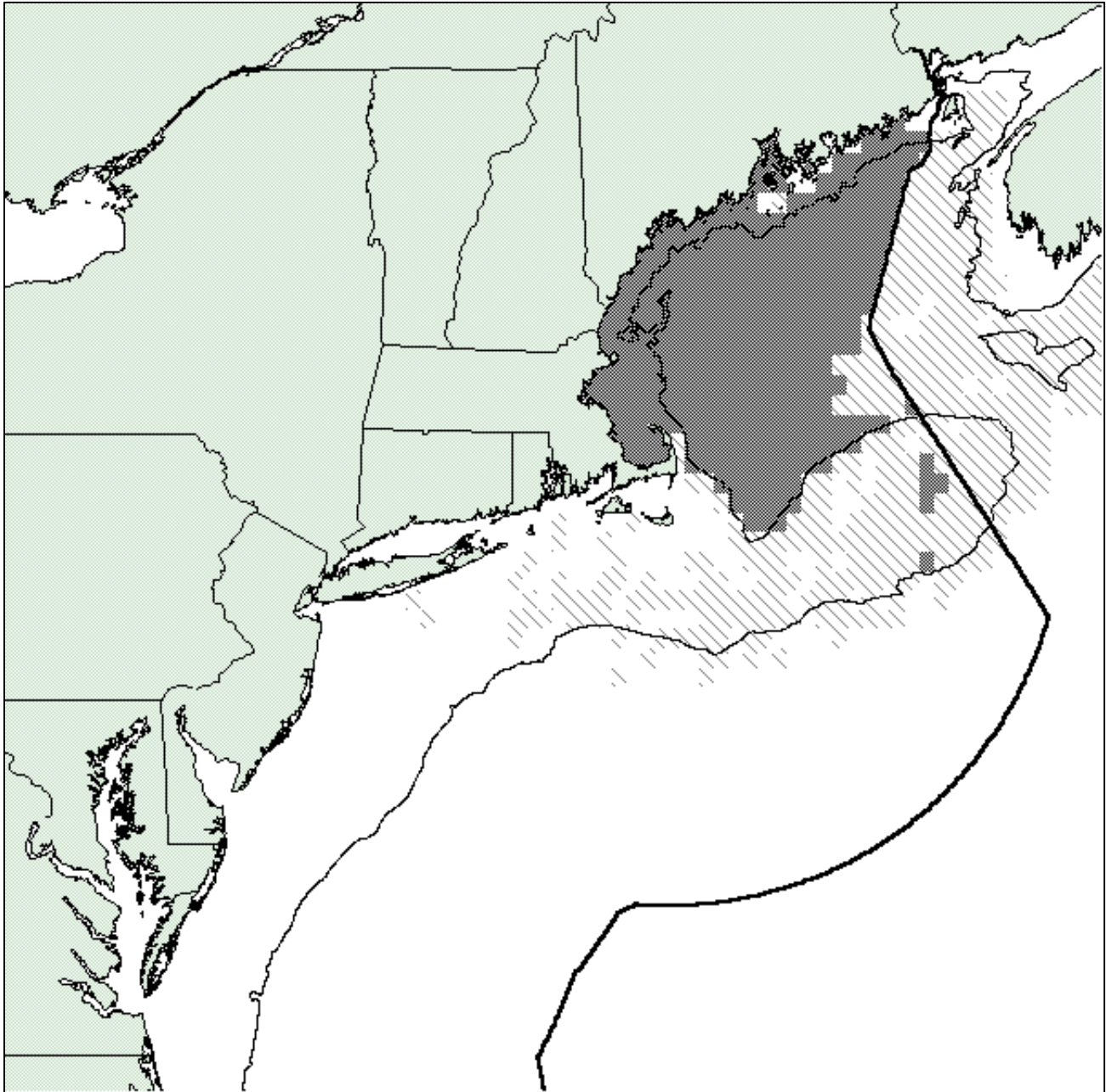


Figure 6.4: The EFH designation for adult American plaice is based upon alternative 3 for American plaice adults. The EFH designations also include the areas identified by the fishing industry and the inshore surveys as important for American plaice adults, as well as those bays and estuaries identified by the NOAA ELMR program as supporting American plaice adults at the "common" or "abundant" level. This designation was selected to include the areas where American plaice are most abundant, given that they are most concentrated in the Gulf of Maine and occur in relatively low concentrations on Georges Bank. The light shading represents the entire observed range of adult American plaice.