

## **Essential Fish Habitat Description**

### **Ocean pout (*Macrozoarces americanus*)**

In its *Report to Congress: Status of the Fisheries of the United States* (September 1997), NMFS determined ocean pout is not currently overfished. This determination is based on an assessment of stock level. Essential Fish Habitat for ocean pout 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 5.1 - 5.4 and in the accompanying table and meet the following conditions:

**Eggs:** Bottom habitats in the Gulf of Maine, Georges Bank, southern New England and the middle Atlantic south to Delaware Bay as depicted in Figure 5.1. Due to low fecundity, relatively few eggs (< 4200) are laid in gelatinous masses, generally in hard bottom sheltered nests, holes, or crevices where they are guarded by either female or both parents. Generally, the following conditions exist where ocean pout eggs are found: water temperatures below 10° C, depths less than 50 meters, and a salinity range from 32 - 34‰. Ocean pout egg development takes two to three months during late fall and winter.

**Larvae:** Bottom habitats in the Gulf of Maine, Georges Bank, southern New England and the middle Atlantic south to Delaware Bay as depicted in Figure 5.2. Larvae are relatively advanced in development and are believed to remain in close proximity to hard bottom nesting areas. Generally, the following conditions exist where ocean pout larvae are found: sea surface temperatures below 10° C, depths less than 50 meters, and salinities greater than 25‰. Ocean pout larvae are most often observed from late fall through spring.

**Juveniles:** Bottom habitats, often smooth bottom near rocks or algae in the Gulf of Maine, Georges Bank, southern New England and the middle Atlantic south to Delaware Bay as depicted in Figure 5.3. Generally, the following conditions exist where ocean pout juveniles are found: water temperatures below 14° C, depths less than 80 meters, and salinities greater than 25‰.

**Adults:** Bottom habitats in the Gulf of Maine, Georges Bank, southern New England and the middle Atlantic south to Delaware Bay as depicted in Figure 5.4. Generally, the following conditions exist where ocean pout adults are found: water temperatures below 15° C, depths less than 110 meters, and a salinity range from 32 - 34‰.

**Spawning Adults:** Bottom habitats with a hard bottom substrate, including artificial reefs and shipwrecks, in the Gulf of Maine, Georges Bank, southern New England and the middle Atlantic south to Delaware Bay as depicted in Figure 5.4. Generally, the following conditions exist where spawning ocean pout adults are found: water temperatures below 10° C, depths less than 50 meters, and a salinity range from 32 - 34‰. Ocean pout spawn from late summer through early winter, with peaks in September and October.

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**  
**Ocean pout (*Macrozoarces americanus*)**

<b>Estuaries and Embayments</b>	<b>Eggs</b>	<b>Larvae</b>	<b>Juveniles</b>	<b>Adults</b>	<b>Spawning Adults</b>
Passamaquoddy Bay	S	S	S	S	S
Englishman/Machias Bay	S	S	S	S	S
Narraguagus Bay	S	S	S	S	S
Blue Hill Bay	S	S	S	S	S
Penobscot Bay	S	S	S	S	S
Muscongus Bay	S	S	S	S	S
Damariscotta River	S	S	S	S	S
Sheepscot River	S	S	S	S	S
Kennebec / Androscoggin Rivers	S	S	S	S	S
Casco Bay	S	S	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	
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**  
**Ocean pout (*Macrozoarces americanus*) Eggs**

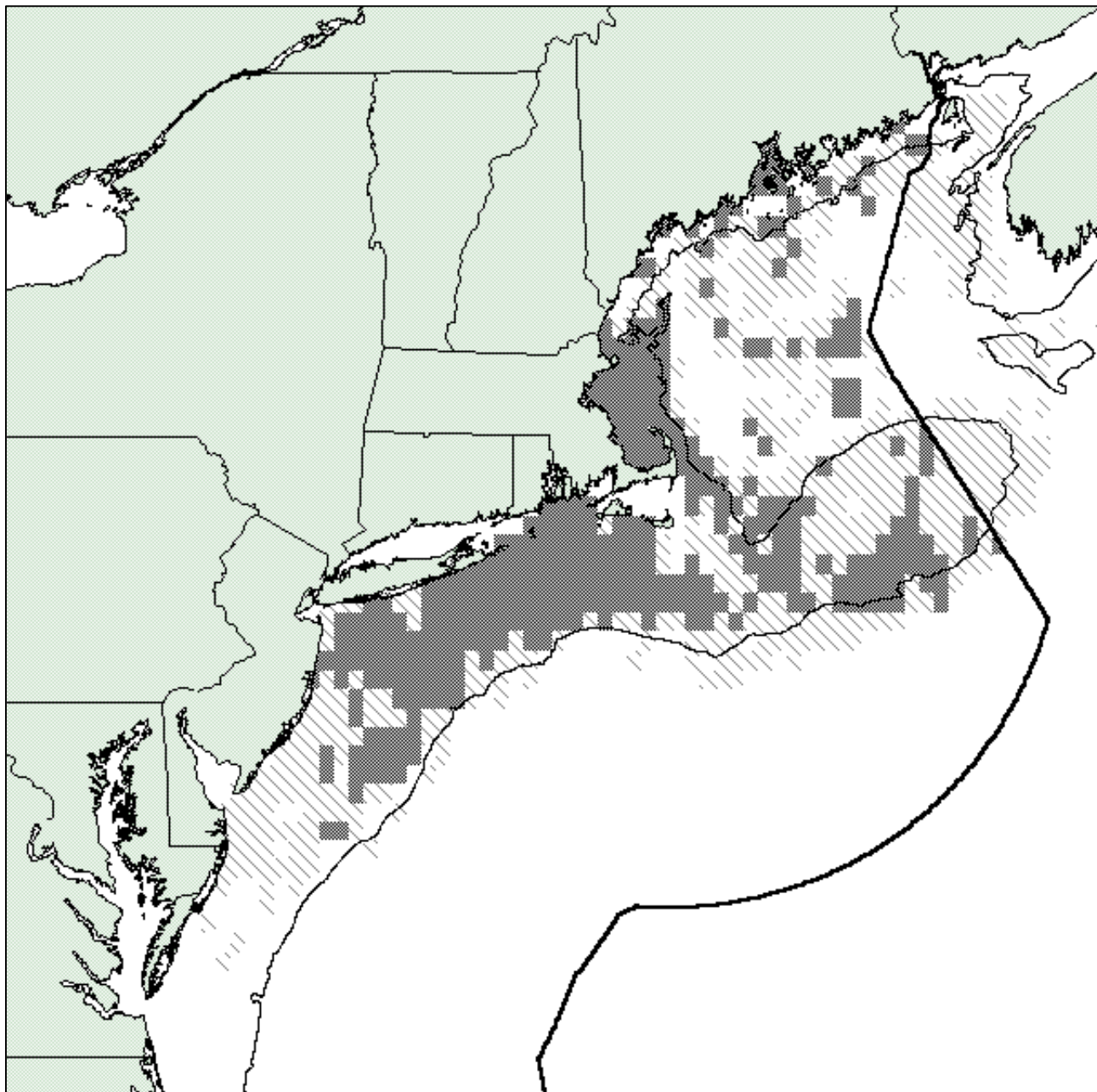


Figure 5.1: The EFH designation for ocean pout eggs is based upon the combination of alternative 3 for ocean pout juveniles and alternative 3 for ocean pout adults, in addition to those bays and estuaries identified by the NOAA ELMR program as supporting ocean pout eggs at a "common" or "abundant" level. This designation also includes areas of relatively high concentrations of ocean pout from the State of Massachusetts inshore trawl survey and the Connecticut Long Island Sound survey. Ocean pout eggs are found only in demersal nests, thus eggs are not sampled effectively with the MARMAP ichthyoplankton survey. The distribution of ocean pout juveniles and adults serves as a proxy for actual distribution data on eggs. This alternative was selected as most representative of where ocean pout eggs are likely to be found in relatively high concentrations. The light shading represents the entire observed range of ocean pout adults.

**Essential Fish Habitat**  
**Ocean pout (*Macrozoarces americanus*) Larvae**

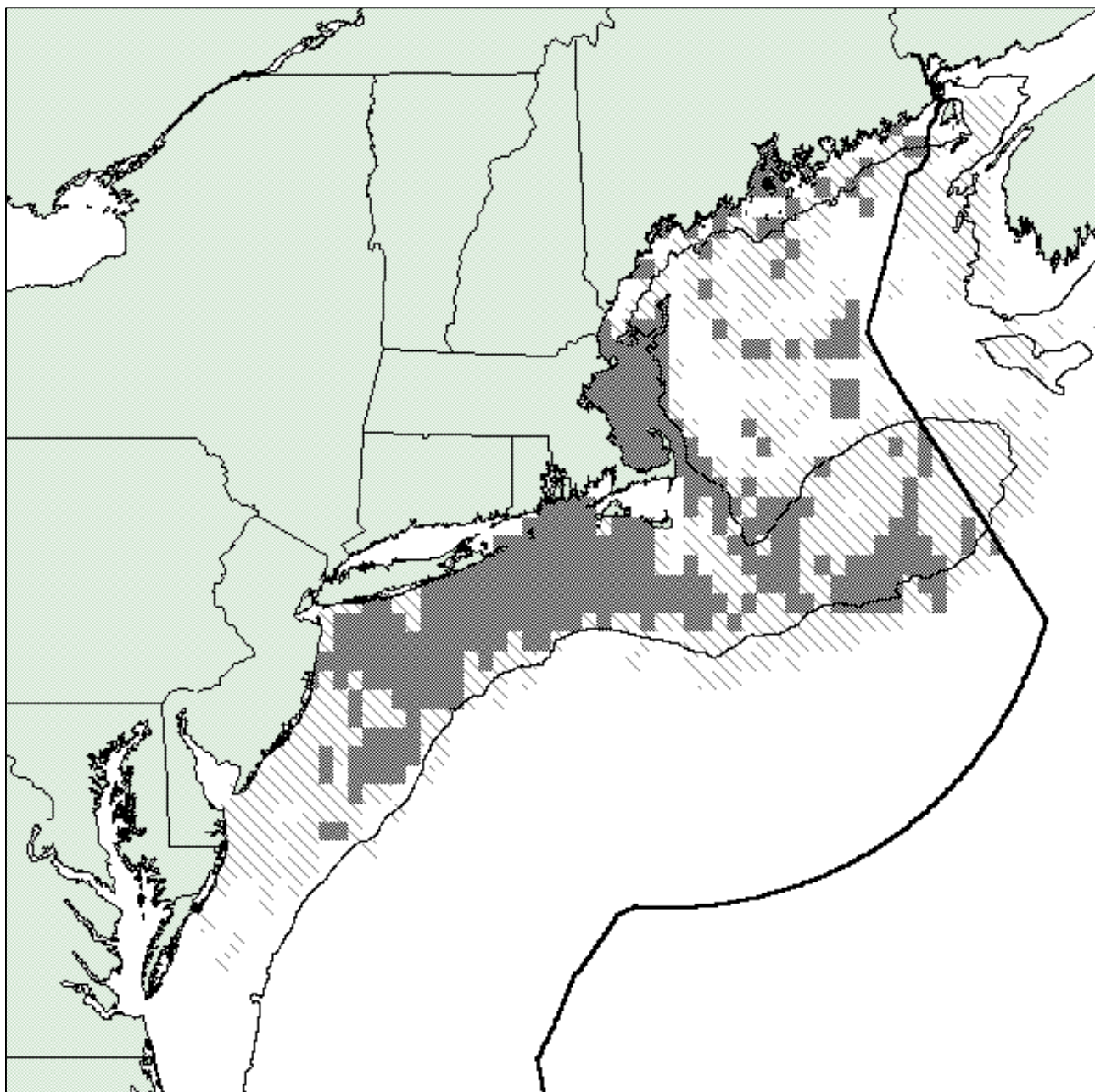


Figure 5.2: The EFH designation for ocean pout larvae is based upon the combination of alternative 3 for ocean pout juveniles and alternative 3 for ocean pout adults, in addition to those bays and estuaries identified by the NOAA ELMR program as supporting ocean pout larvae at a "common" or "abundant" level. This designation also includes areas of relatively high concentrations of ocean pout from the State of Massachusetts inshore trawl survey and the Connecticut Long Island Sound survey. Ocean pout larvae remain in close proximity with the nests, thus larvae are not sampled effectively with the MARMAP ichthyoplankton survey. The distribution of ocean pout juveniles and adults serves as a proxy for actual distribution data on larvae. This alternative was selected as most representative of where ocean pout larvae are likely to be found in relatively high concentrations. The light shading represents the entire observed range of ocean pout adults.



**Essential Fish Habitat**  
**Ocean pout (*Macrozoarces americanus*) Juveniles**

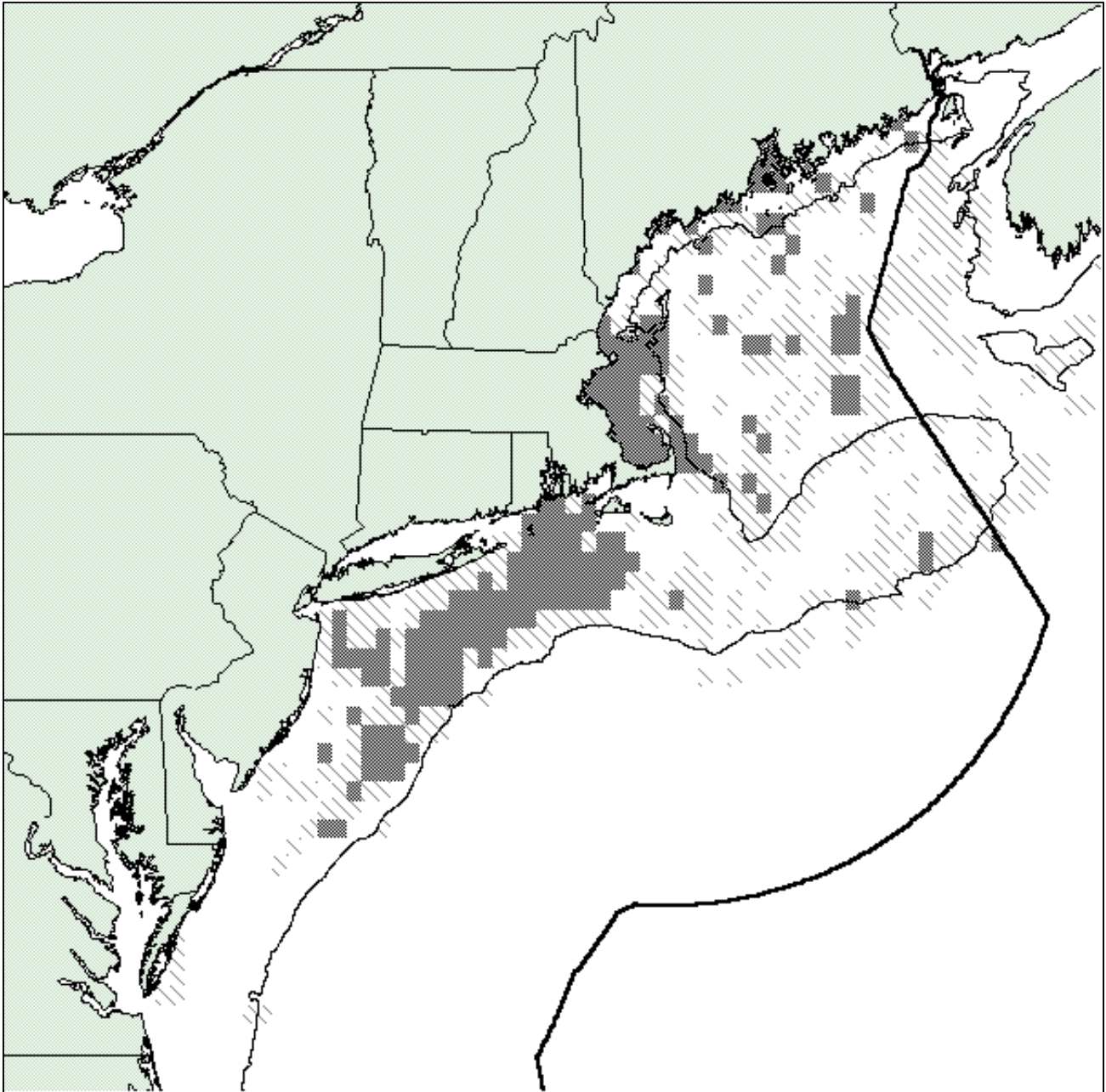


Figure 5.3: The EFH designation for juvenile ocean pout is based upon alternative 3 for juvenile ocean pout, plus those bays and estuaries identified by the NOAA ELMR program as supporting juvenile ocean pout at a "common" or "abundant" level. This designation also includes areas of relatively high concentrations of ocean pout from the State of Massachusetts inshore trawl survey and the Connecticut Long Island Sound survey. This alternative was selected to be inclusive of most areas where ocean pout occur in relatively high concentrations. The light shading represents the entire observed range of juvenile ocean pout.

**Essential Fish Habitat**  
**Ocean pout (*Macrozoarces americanus*) Adults**

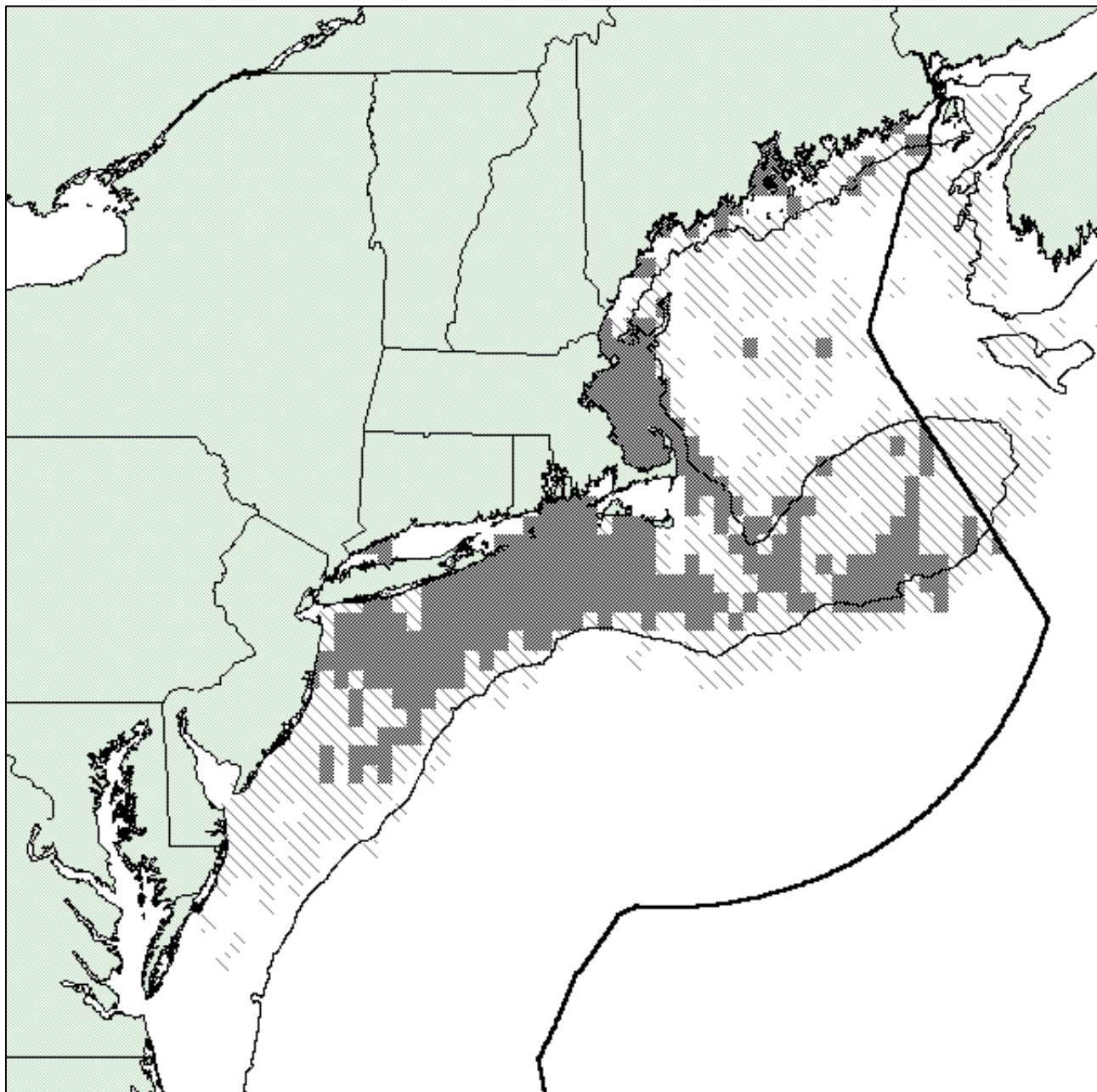


Figure 5.4: The EFH designation for adult ocean pout is based upon alternative 3 for adult ocean pout, plus those bays and estuaries identified by the NOAA ELMR program as supporting adult ocean pout at a "common" or "abundant" level. This designation also includes areas of relatively high concentrations of ocean pout from the State of Massachusetts inshore trawl survey and the Connecticut Long Island Sound survey. This alternative was selected to be inclusive of most areas where ocean pout occur in relatively high concentrations. The light shading represents the entire observed range of adult ocean pout.