



**NOAA Habitat Conservation**  
*Conserving Habitat for Future Generations*

# Habitat Protection in the Magnuson-Stevens Act:

*Opportunities and requirements for  
essential fish habitat and deep-sea coral protection*



**ESSENTIAL  
FISH HABITAT**

Habitat Protection Reaches Milestone

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# Topics covered today:

- ✓ Habitat conservation in the Magnuson-Stevens Act
- ✓ Federal requirements for protecting Essential Fish Habitat (EFH)
- ✓ Authorities for conserving deep-sea coral habitats
- ✓ NOAA efforts to better integrate habitat conservation into ecosystem-based fisheries management

# Habitat and Fisheries Management in the Magnuson-Stevens Act

“...direct and indirect habitat losses... have resulted in a diminished capacity to support existing fishing levels.”

- MSA § (2)(a)(2)

“One of the greatest long-term threats to the viability of commercial and recreational fisheries is the continuing loss of marine, estuarine, and other aquatic habitats.”

- MSA § (2)(a)(9)

# Habitat and Fisheries Management in the Magnuson-Stevens Act



## **1996 Sustainable Fisheries Act**

- Bycatch
- Rebuilding
- Essential Fish Habitat

## **2007 MSA Reauthorization Act**

- Community-Based Restoration Program
- Deep-sea Coral Research & Technology Program
- Deep-sea coral protection

# Essential Fish Habitat

*“Essential fish habitat means those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.”*

- MSA §3 (10)



## Key points to remember:

- Habitat = more than the bottom
- Can be within state waters
- Federally managed species only

# Joint responsibility to conserve EFH



## Council responsibilities *(with help from NOAA)*:

1. Describe and identify EFH by life stage
2. Develop maps to display geographic locations of EFH
3. Designate Habitat Areas of Particular Concern (HAPCs)
4. Minimize adverse effects of fishing on EFH
5. Review new information and update EFH descriptions at least every 5 years

## NOAA & Council responsibilities:

6. NOAA **must** consult on non-fishing actions that may adversely affect EFH
7. Councils **may** consult on non-fishing actions, and **must** consult on impacts to diadromous fish habitat

# 1. Describe & identify EFH by lifestage

## Atlantic cod EFH



**Eggs:** Surface waters around the perimeter of the Gulf of Maine, Georges Bank, and eastern continental shelf off southern New England. SST below 12°C, water depths <110 meters, and salinity 32-33‰. Cod eggs are most often observed beginning in the fall, with peaks in the winter and spring.



**Larvae:** Pelagic waters of the Gulf of Maine, Georges Bank, and eastern continental shelf off southern New England. SST <10°C, water depths 30-70 meters, and salinity 32-33‰. Cod larvae are most often observed in the spring.



**Juveniles:** Bottom habitats with a substrate of cobble or gravel in the Gulf of Maine, Georges Bank, and eastern continental shelf off southern New England. Water temperatures below 20°C, depths 25 - 75 meters, and salinity 30 - 35‰.



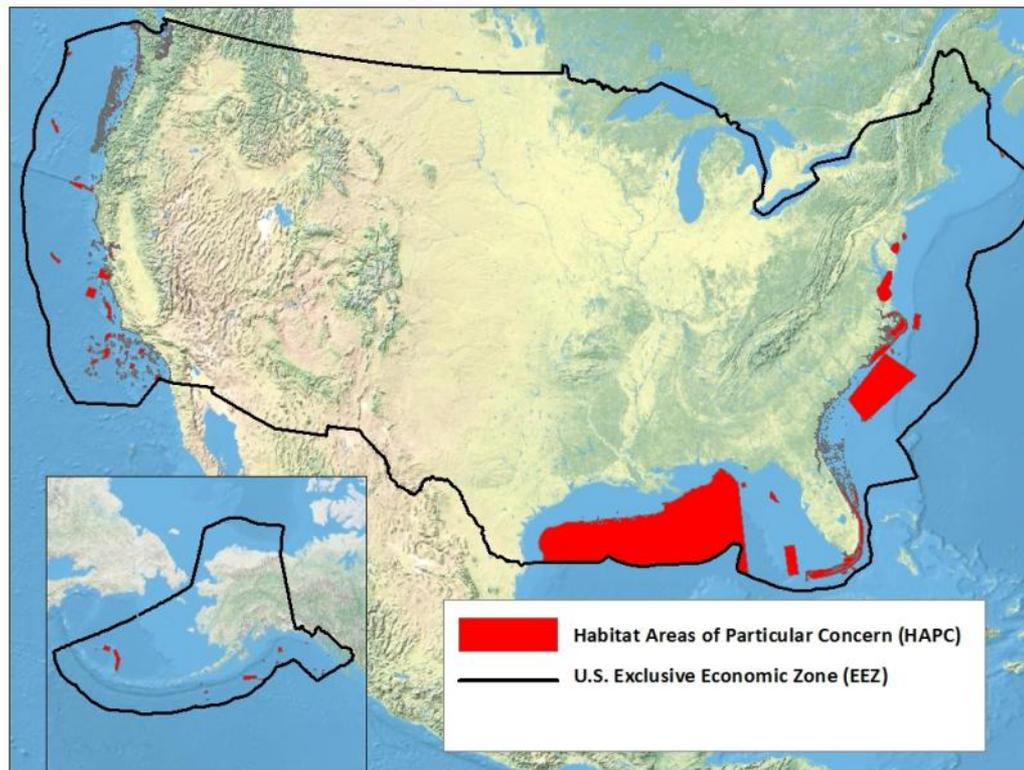
**Adults:** Bottom habitats with a substrate of rocks, pebbles, or gravel in the Gulf of Maine, Georges Bank, southern New England, and the middle Atlantic south to Delaware Bay.  
Water temperatures <10°C, depths 10 - 150 meters, and a wide range of oceanic salinities.

# 2. Map geographic location of EFH

The screenshot displays the NOAA Habitat Conservation Essential Fish Habitat Mapper interface. The top navigation bar includes the NOAA logo and the text "NOAA HABITAT CONSERVATION | HABITAT PROTECTION" with "NATIONAL MARINE FISHERIES SERVICE" below. The main interface is titled "Essential Fish Habitat Mapper" and features a search bar with "Zoom", "Extent", and "Location Query" options. On the left, a sidebar contains several toolbars and dropdown menus. A red arrow points to the "Essential Fish Habitat" dropdown menu, which is currently set to "Atlantic Cod". Below this, there are sections for "Text Description" (showing "Atlantic Cod" with a layer transparency slider), "Legend" (with a "Click to switch between lifestyles" instruction and a color-coded legend for Juvenile (pink), Eggs (green), Larvae (blue), Adult (red), and ALL (yellow)), and "NOAA Nautical Charts" (with a visibility slider). The main map area shows a geographic view of the Atlantic coast from the Gulf of St. Lawrence down to the Chesapeake Bay. A large yellow-shaded area, representing the Essential Fish Habitat for Atlantic Cod, covers the waters from the Gulf of St. Lawrence and the Bay of Fundy southward along the coast. A red arrow points to the legend, specifically to the "ALL" category. In the bottom right corner of the map, there is an inset image of an Atlantic Cod fish.

# 3. Designate HAPCs

- Habitat Areas of Particular Concern (HAPCs) are subsets of EFH
- Purpose is to focus conservation efforts
- HAPC Criteria
  - Ecological functions provided
  - Sensitivity to human-induced degradation
  - Rarity of habitat type
  - Stress from development activities
- Increased scrutiny in consultation process



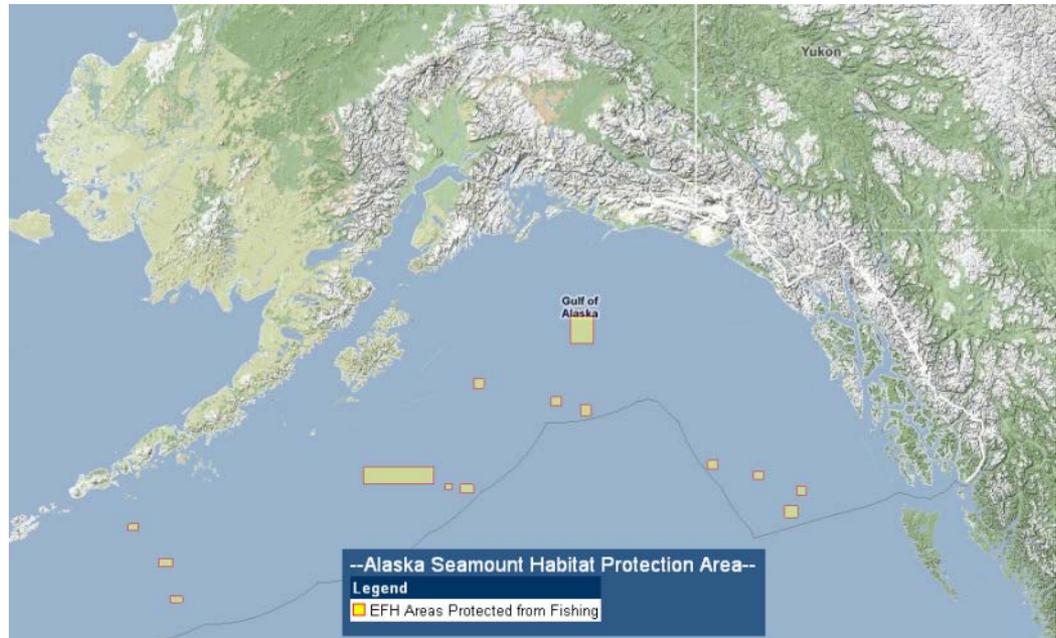
# 4. Minimize fishing impacts on EFH

Councils are required to minimize, *to the extent practicable*, adverse effects caused by fishing

- MSA § 303(a)(7)

## Alaska Seamount Habitat Protection Area

Fishing with bottom contact gear prohibited to protect deep-sea corals and EFH for groundfish, king crab, and Pacific salmon



Since 2004, NOAA and the Councils have protected more than 800 million acres of EFH from harmful fishing practices.

# 5. Review and update every 5 years

- ✓ EFH descriptions
- ✓ EFH maps
- ✓ Impacts of fishing on EFH
- ✓ Non-fishing related threats to EFH

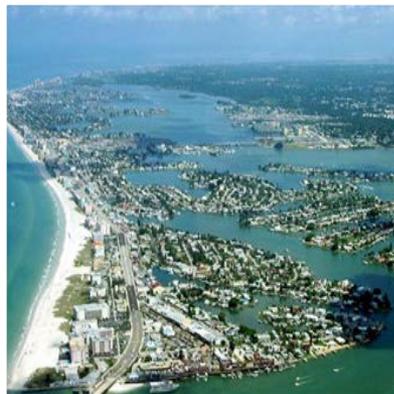


# 6. NOAA consults on non-fishing activities

Federal agencies **must** consult with NOAA on actions that may adversely affect EFH



- 5,000+ federal actions every year
- Non-binding conservation recommendations
- Federal agencies required to respond



# 7. Councils **comment** on non-fishing activities

Councils **may** comment on actions that may affect the habitat of a fishery resource under its authority - MSA §305 (b)(3)(A)

Councils **must** comment on actions that are likely to substantially affect the habitat of anadromous fish - MSA §305 (b)(3)(B)



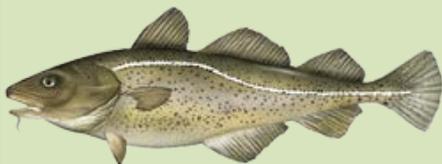
## **Winthrop Beach Restoration**

Mass. sought permit to mine offshore sand & gravel

**NEFMC** weighed in on impacts to juvenile cod EFH

**Result:** Army Corps denied permit; alternative source of substrate identified.

(2006-2008)



See **50 CFR §600.30** Council comments and recommendations to Federal and state agencies

# EFH Conservation Recommendations

Dept. of Energy --  
Construction, operation and  
maintenance of a 336 mile  
transmission cable.



## **NOAA's EFH Conservation Recommendation:**

**No in-water work from January 15 to May 31 to minimize impacts to spawning and early life stages of winter flounder.**

# EFH Mapper

[www.habitat.noaa.gov/efhmapper](http://www.habitat.noaa.gov/efhmapper)

EFH Mapper

www.habitat.noaa.gov/protection/efh/efhmapper/index.html

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NATIONAL MARINE FISHERIES SERVICE

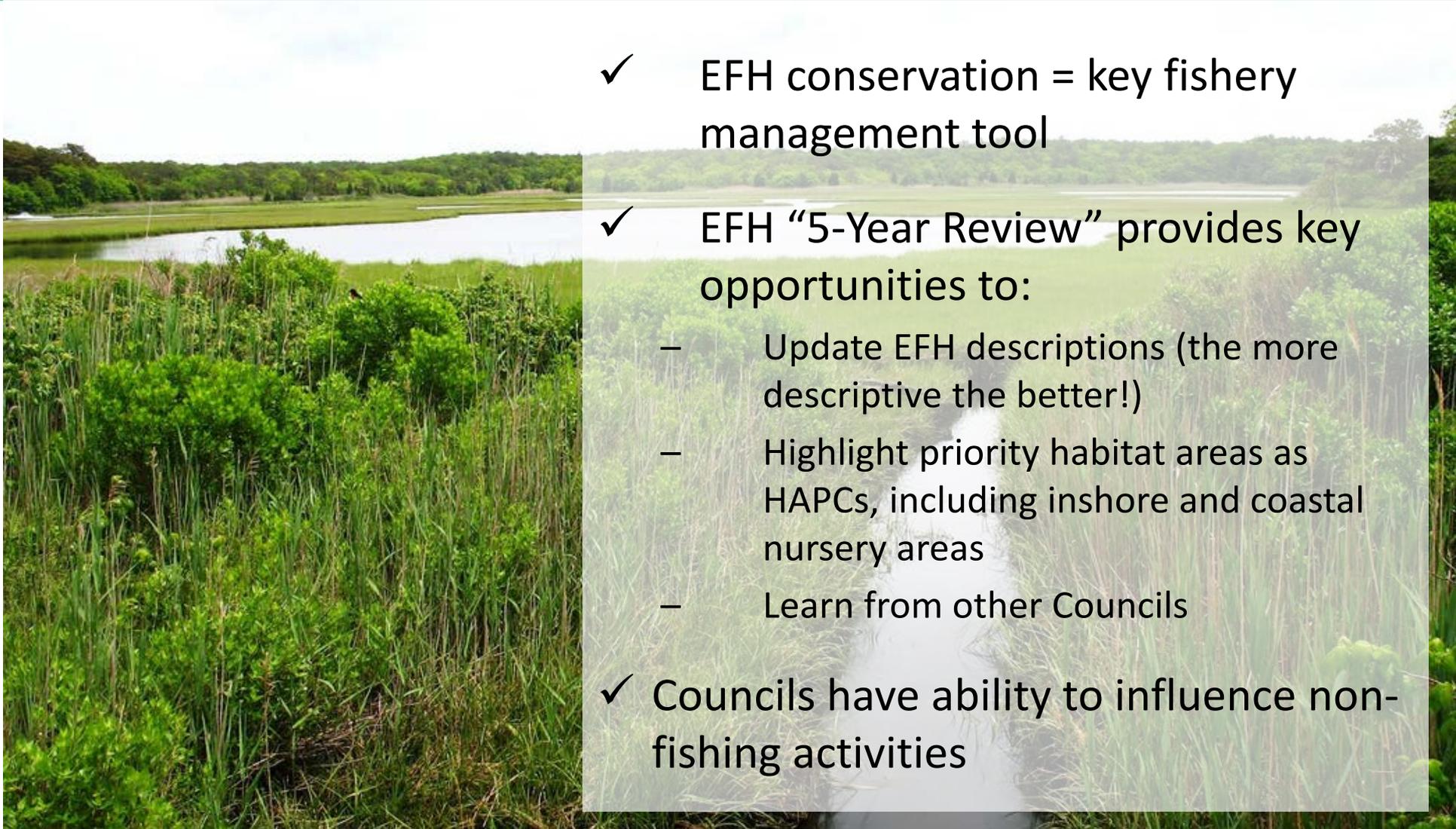
Essential Fish Habitat Mapper

EFH View Tool | Data Query Tool

Show	Link	Data Caveats	Species/Management Unit	Lifestage(s) Found at Location	Management Council	FMP
			Red Drum	ALL	Gulf of Mexico	Red Drum
			Shrimp (4 Species) Brown shrimp ( <i>Penaeus aztecus</i> ) White shrimp ( <i>Penaeus setiferus</i> ) Pink shrimp ( <i>Penaeus duorarum</i> ) Royal red shrimp ( <i>Decapoda robustus</i> )	ALL	Gulf of Mexico	Shrimp
			Coastal Migratory Pelagics	ALL	Gulf of Mexico	Coastal Migratory Pelagics
			Reef Fish (43 Species) <b>Balistidae - Triggerfishes</b> Gray triggerfish ( <i>Balistes capricus</i> ) <b>Carangidae - Jacks</b> Greater amberjack ( <i>Seriola dumeril</i> ) Lesser amberjack ( <i>Seriola fasciata</i> ) Almaco jack ( <i>Seriola rivoliana</i> ) Banded rudderfish ( <i>Seriola zonata</i> ) <b>Labridae - Wrasses</b> Hogfish ( <i>Lachnolaimus maximus</i> ) <b>Lutjanidae - Snappers</b> Queen snapper ( <i>Etelis oculatus</i> ) Mutton snapper ( <i>Lutjanus analis</i> ) Schoolmaster ( <i>Lutjanus apodus</i> ) Blackfin snapper			

Zoom: [icon] [icon] Extent: [icon] [icon] Location Query: [icon] Help: [icon] [icon] [icon]

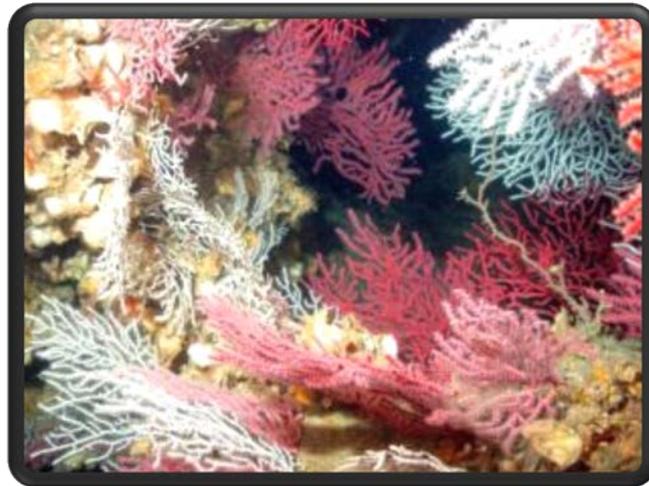
# EFH Key Points:

- 
- ✓ EFH conservation = key fishery management tool
  - ✓ EFH “5-Year Review” provides key opportunities to:
    - Update EFH descriptions (the more descriptive the better!)
    - Highlight priority habitat areas as HAPCs, including inshore and coastal nursery areas
    - Learn from other Councils
  - ✓ Councils have ability to influence non-fishing activities

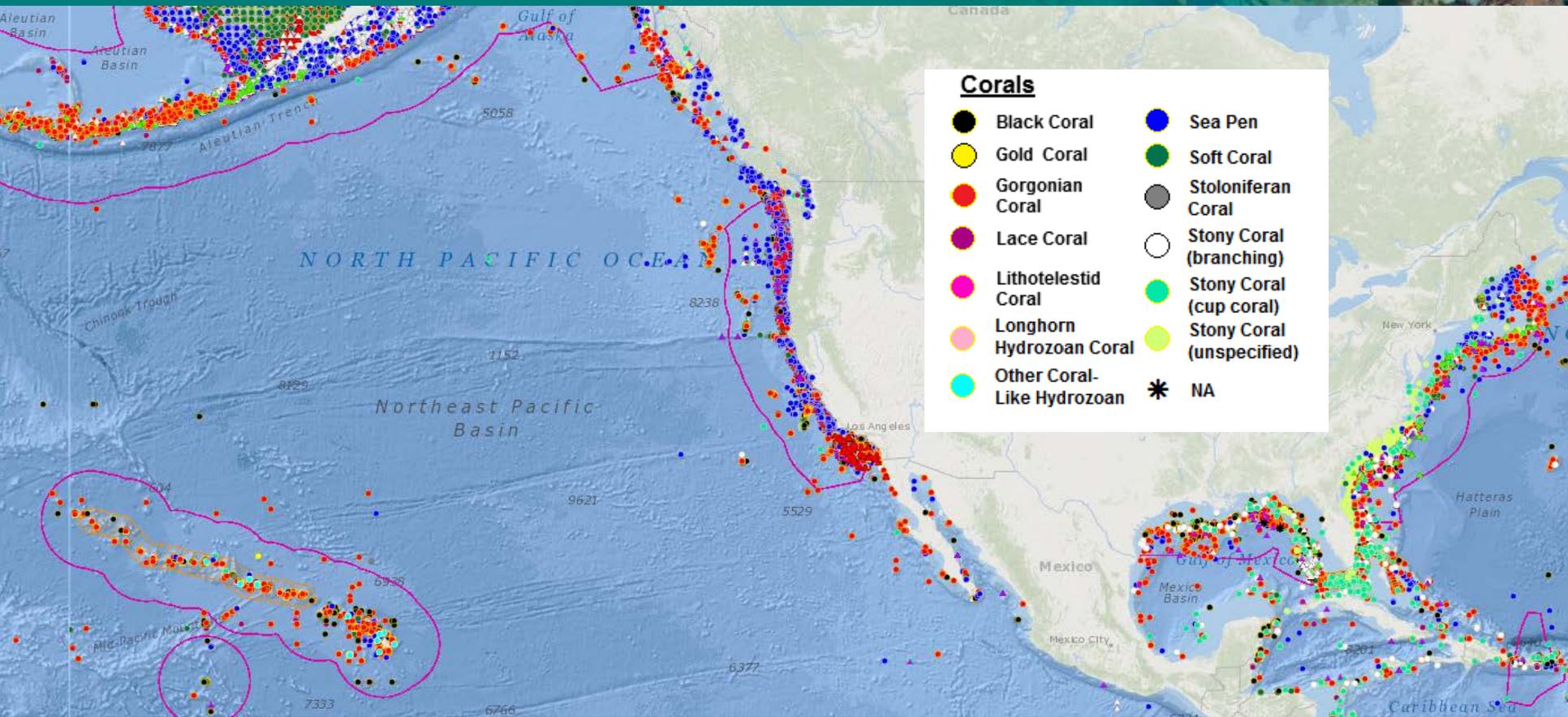
# Deep-Sea Corals

*Structure-forming deep-sea corals:* coral species with complex branching structure that provide habitat to other species. Unlike shallow corals, deep-sea corals are generally found deeper than 50m and do not require sunlight.

- Hotspots of biological diversity
- May be Essential Fish Habitat
- Targets for biomedical research
- Vulnerable to human impacts



# Where Are Deep-Sea Corals?



Stony Coral

Gorgonian

Black Coral

Gold Coral

Lace Coral

Structure-Forming  
Deep-Sea Corals  
of the U.S.



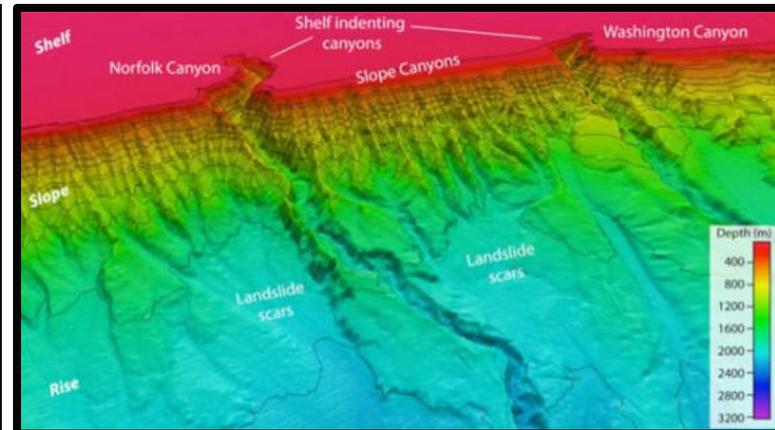
# Deep-Sea Coral Research and MSA

## Magnuson-Stevens Act (2007) Established Deep Sea Coral Research and Technology Program (DSCRTP)

NOAA, in consultation with Councils, established a program to

- Identify existing research on, and known locations of, deep-sea corals;
- Monitor activity in deep-sea coral locations; and
- Conduct research on and locate and map locations of deep-sea corals.

- MSA §408



Magnuson-Stevens Act **requires** Councils to minimize the impacts of fishing to essential fish habitat

- MSA §303(a)(7)

If described as EFH, Councils must protect deep-sea corals from fishing

Examples:

- Late juvenile and adult yelloweye rockfish (NPFMC)
- Snapper grouper species (SAFMC)
- Coral species in Coral FMP (SAFMC)



Conservation and management measures shall, to the extent practicable, **minimize bycatch**

- MSA §301(a)(9)



Credit: Greenpeace

Magnuson-Stevens Act (2007) gave Councils **discretionary** authority to protect deep-sea corals from fishing MSA 303(b)(2)(B)

- Councils may designate deep-sea coral zones
- Councils may protect deep-sea corals from physical damage from fishing gear within zones
- Councils may establish measures to limit damage to fishing gear from interactions with deep-sea corals



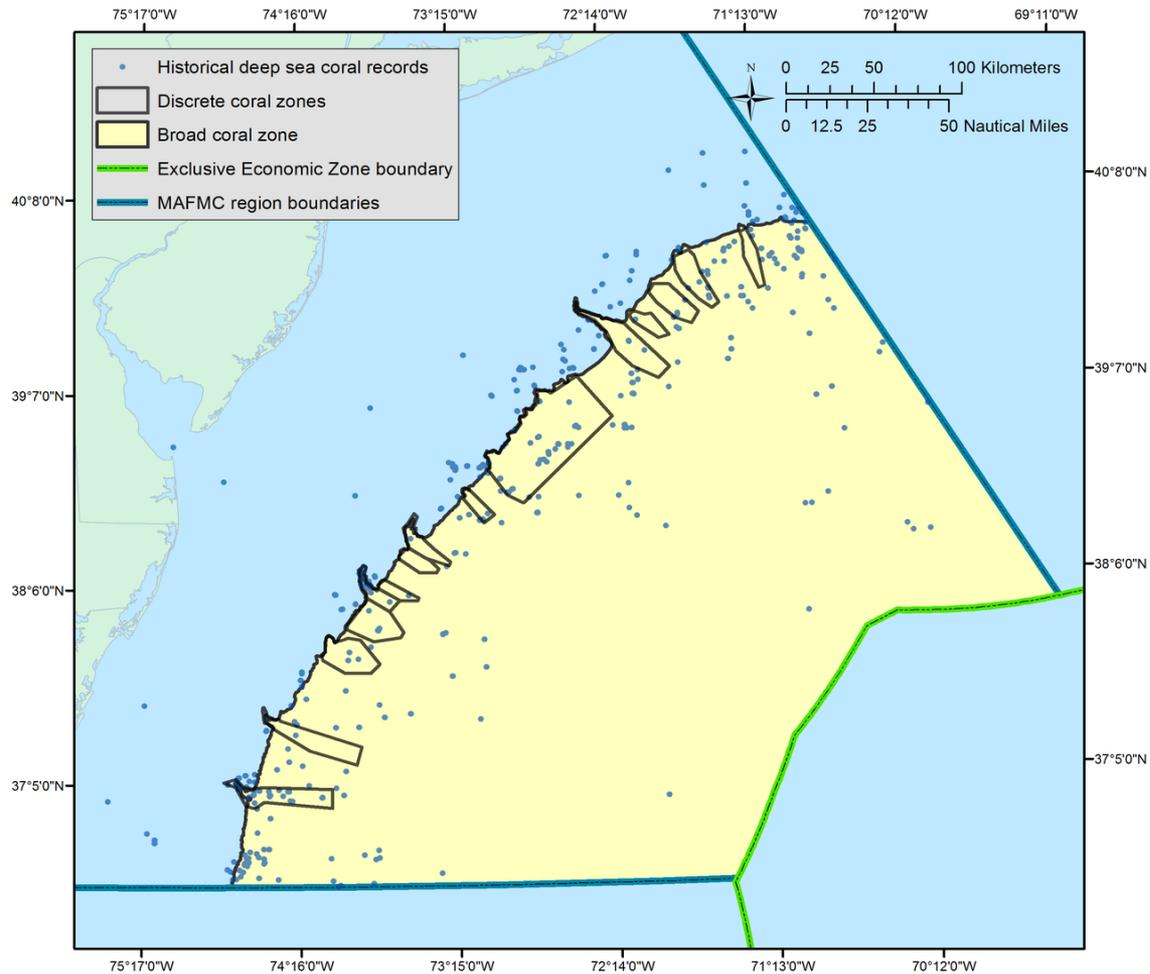
Un-trawled



Trawled

# Deep-Sea Coral Conservation and MSA

# Mid-Atlantic deep-sea coral zones



Map source: MAFMC

# Deep-Sea Coral Key Points:

- ✓ DSC provide valuable habitat, but are vulnerable to fishing gear and recover slowly
- ✓ The Deep Sea Coral Research and Technology Program funds and provides research to Councils to conserve and manage ecosystems
- ✓ DSC can be protected through EFH designation, discretionary authority, and/or bycatch authority

# Next Steps: Integrating habitat conservation into ecosystem-based fisheries management



- Fill gaps in habitat science
- Implement a more strategic approach to habitat conservation
- Integrate habitat conservation into fishery management decisions
- Share habitat and ecosystem strategies across fishery management councils

An underwater photograph of a coral reef. In the foreground, two large fish with dark, patterned scales and prominent eyes are swimming. The background is filled with many smaller, silvery fish. The water is a clear, vibrant blue-green. The coral reef is diverse, with various shapes and colors including orange, white, and brown.

# Thanks!

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# EFH Resources:

## EFH essentials:

- EFH website: <http://www.habitat.noaa.gov/efh>
- EFH Final Rule: <http://www.greateratlantic.fisheries.noaa.gov/hcd/efhfinalrule.pdf>
- Magnuson-Stevens Fishery Conservation & Management Act: [http://www.nmfs.noaa.gov/sfa/magact/MSA\\_Amended\\_2007%20.pdf](http://www.nmfs.noaa.gov/sfa/magact/MSA_Amended_2007%20.pdf)
- EFH Mapper and Data Inventory: <http://www.habitat.noaa.gov/efhmapper>

## Guidance documents:

- Refining the description and identification of EFH: <http://www.nmfs.noaa.gov/op/pds/documents/03/201/03-201-15.pdf>

**Contact info:** <http://www.habitat.noaa.gov/protection/efh/regionalcontacts.html>

# Deep-sea Coral Resources



- NOAA Strategic Plan for DSC and Sponge Ecosystems  
[http://coris.noaa.gov/activities/deepsea\\_coral](http://coris.noaa.gov/activities/deepsea_coral)
- Deep Sea Research and Technology Program Factsheet  
[http://www.habitat.noaa.gov/pdf/NOAA\\_DSC\\_Fact\\_Sheet\\_2016.pdf](http://www.habitat.noaa.gov/pdf/NOAA_DSC_Fact_Sheet_2016.pdf)
- The State of DSC Ecosystems in the U.S.  
<https://deepseacoraldata.noaa.gov/library/2015-state-of-deep-sea-corals-report>
- Deep Sea Research and Technology Program 2016 Report to Congress  
<https://deepseacoraldata.noaa.gov/library/2016-dsc-report-to-congress>
- Deep-Sea Coral Data Portal  
<https://deepseacoraldata.noaa.gov/>