

Current and Proposed Habitat Areas of Particular Concern (HAPCs)

Compiled May 2015, Updated April 2016

This document includes information about existing and proposed Habitat Areas of Particular Concern (HAPCs), including discrete sites and habitat types, identified by the eight regional fishery management councils and NOAA Fisheries Highly Migratory Species Division. This is accurate and up to date to the best of our knowledge, but should be used as a starting point for further investigation rather than a comprehensive reference. This document was compiled as a supplement to the report, “Regional Use of the Habitat Area of Particular Concern (HAPC) Designation,” prepared by the Fisheries Leadership & Sustainability Forum for the Mid-Atlantic Fishery Management Council. This report includes additional detail about each region’s use of the HAPC provision.

In this document, HAPCs are organized by region, with references to implementing actions and additional resources (primarily fishery management plans and their amendments) which may include maps, coordinates, depth contours, overlay with habitat protections and gear restrictions, and justification for HAPC designation with regard to the 4 HAPCs considerations (i.e., ecological function, sensitivity, exposure to development stress, and rarity).

Additional notes:

- This document does not include HAPC designations that were later rescinded or replaced. This information is included in the HAPC report.
- This document may include some references to numbers of HAPC sites where this information is clearly numbered or referenced in supporting documents. However, there is not a total number of HAPCs provided by region or in sum. The number of HAPCs per region may be difficult to identify, as demonstrated by the following examples:
 - A single habitat type identified as HAPC may include references to specific locations and examples (e.g., all ___ including the following locations...).
 - A set of discrete locations (e.g. seamounts, rivers) may be considered one HAPC or multiple.
 - In most cases the date (year) given for each implementing amendment refers to the date of the final amendment. In some cases the date of final rule is provided.
 - Some regions are in the process of identifying HAPCs (New England, Western Pacific, Atlantic HMS) In most regions the most useful reference for additional information about existing HAPCs (coordinates, maps, etc.) is the most recent, although in some cases additional information about the rationale for identifying HAPCs requires revisiting original amendments and/or EISs.
 - In some regions HAPC is clearly identified within the context of a specific FMP; in others HAPC may include EFH for multiple species/complexes and/or is not clearly associated with a single FMP.

1. New England Fishery Management Council

Current HAPCs

Implementing action: Omnibus EFH Amendment 1 (1998)

- Atlantic Salmon HAPC: 11 rivers in Maine, including: Dennys, Machias, East Machias, Pleasant, Narraguagus, Ducktrap, Sheepscot, Kennebec, Penobscot, St. Croix, Tunk Stream
- Northern Edge Juvenile Cod HAPC

HAPC Candidates (2016) (pending NOAA Fisheries approval)

Implementing action: Omnibus EFH Amendment 2 (2016)

In addition to existing HAPCs:

- Inshore Juvenile Cod HAPC (inshore areas of the Gulf of Maine and Southern New England, 0-20 m)
- Great South Channel Juvenile Cod HAPC
- Cashes Ledge HAPC
- Jeffreys Ledge/Stellwagen Bank HAPC
- Bear and Retriever Seamounts HAPC
- Canyon HAPCs
 - Heezen Canyon
 - Lydonia, Gilbert, & Oceanographer Canyons
 - Hydrographer Canyon
 - Veatch Canyon
 - Alvin & Atlantis Canyons
 - Hudson Canyon
 - Toms, Middle Toms & Hendrickson Canyons
 - Wilmington Canyon
 - Baltimore Canyon
 - Washington Canyon
 - Norfolk Canyon

Reference: See Omnibus Amendments 1 and 2 for coordinates, references to HAPC considerations, maps, etc. for all current HAPCs:

- <http://s3.amazonaws.com/nefmc.org/OriginalOmnibusAmendment.PDF> and
- <http://www.nefmc.org/library/omnibus-habitat-amendment-2>

2. Mid-Atlantic Fishery Management Council

Summer Flounder HAPC

Implementing action: Amendment 12 to the Summer Flounder, Scup, and Black Sea Bass FMP (1998)

http://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/53e3ac8ce4b0b6a302b8dea3/1407429772601/SFSCBSB_Amend_12.pdf

“All native species of macroalgae, seagrasses, and freshwater and tidal macrophytes in any size bed, as well as loose aggregations, within adult and juvenile summer flounder EFH is HAPC. If native species of submerged

aquatic vegetation (SAV) are eliminated then exotic species should be protected because of functional value, however, all efforts should be made to restore native species.”

Golden Tilefish HAPC

Implementing action: Amendment 1 to the Tilefish FMP (2009)

http://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/5362971ce4b03e512f44ad00/1398970140914/Tilefish_Amend_1_Vol_1.pdf

Portions of Norfolk, Veatch, Lydonia, and Oceanographer canyons within the depth range within the same depth contour identified as EFH; that is known to have clay outcrop/pueblo habitats.

3. South Atlantic Fishery Management Council

See profile for more information about the distinction between Coral HAPCs established pursuant to the South Atlantic Coral, Coral Reef and Live/Hard Bottom Habitat Fishery Management Plan and EFH-HAPCs designated for managed species or species complexes pursuant to individual South Atlantic Council Fishery Management Plans.

In 1998 through a single administrative action referred to as a “comprehensive amendment,” the South Atlantic Fishery Management Council (SAFMC) amended nine FMPs under its jurisdiction or co-jurisdiction to designate EFH (SAFMC 1998b). When SAFMC completed the FMP for dolphin and wahoo, EFH designations for those species were included in that FMP. In 2012, SAFMC used Comprehensive Ecosystem-Based Amendment 2 (CEBA-2) to designate new EFH-HAPCs for tilefish (managed under the FMP for the snapper/grouper complex) and deepwater coral (managed under the FMP for coral, coral reef and live/hardbottom) and new EFH for the pelagic sargassum (managed under the FMP for Sargassum). The supporting information for the initial EFH and HAPC designations is presented in a report commonly referred to by its abbreviated title Habitat Plan for the South Atlantic Region (SAFMC 1998a). Supporting information for designations made after 1998 appear in the respective FMP or in CEBA-2. More recently, Fishery Ecosystem Plan of the South Atlantic Region (SAFMC 2009) <http://safmc.net/ecosystem-management/fishery-ecosystem-plan-1> reviews and updates much of the supporting information.

Comprehensive EFH Amendment (1998)

http://www.safmc.net/ecosystem/EcosystemManagement/HabitatProtection/SAFMC_HabitatPlan

Red drum was managed by SAFMC at the time of these EFH designations. However, in 2008, management of Atlantic red drum was transferred from the Magnuson-Stevens Act to the Atlantic Coast Act, and with that transfer the EFH and EFH-HAPC designations for red drum were no longer applicable; although NOAA Fisheries may still use the Fish and Wildlife Coordination Act to comment on the effects of a project to Atlantic red drum.

Coral, coral reef, and live bottom EFH-HAPCs

- 10-Fathom Ledge
- Big Rock
- The Point
- Hurl Rocks
- Charleston Bump
- Gray’s Reef National Marine Sanctuary
- *Phragmatopoma* (worm reef) reefs off the central east coast of Florida
- *Oculina* Banks off the east coast of Florida from Ft. Pierce to Cape Canaveral

- Nearshore (0-4 m, 0-12 ft) hard bottom off the east coast of Florida from Cape Canaveral to Broward County
- Offshore (5-30 m, 15-90 ft) hard bottom off the east coast of Florida from Palm Beach County to Fowey Rocks
- Biscayne Bay, Florida
- Biscayne National Park, Florida
- Florida Keys National Marine Sanctuary

Coastal Migratory Pelagics EFH-HAPCs

- Sandy shoals of Cape Lookout, Cape Fear, and Cape Hatteras from shore to the ends of the respective shoals, but shoreward of the Gulf Stream
- The Point
- Ten-Fathom Ledge
- Big Rock
- Charleston Bump
- Hurl Rocks
- The Point off Jupiter Inlet
- *Phragmatopoma* (worm reef) reefs off the central east coast of Florida
- Nearshore hard bottom south of Cape Canaveral
- The Hump off Islamorada, Florida
- The Marathon Hump off Marathon, Florida
- The “Wall” off of the Florida Keys
- Pelagic Sargassum
- Atlantic coast estuaries with high numbers of Spanish mackerel and cobia based on abundance data from the ELMR program including Bogue Sound, New River, and Broad River

Snapper-Grouper EFH-HAPCs

- Medium to high profile offshore hard bottoms where spawning normally occurs
- Localities of known or likely periodic spawning aggregations
- Nearshore hardbottom areas
- The Point
- Ten Fathom Ledge
- Big Rock
- Charleston Bump
- Mangrove habitat
- Seagrass habitat
- Oyster/shell habitat
- All coastal inlets
- All state-designated nursery habitats of particular importance to snapper-grouper*
- Pelagic and benthic *Sargassum*
- Hoyt Hills for wreckfish
- The *Oculina* Bank Habitat Area of Particular Concern
- All hermatypic coral habitats and reefs
- Manganese outcroppings on the Blake Plateau
- SAFMC designated Artificial Reef Special Management Zones

* The table below references the state regulations that designate areas that serve as nursery habitat and warrant special protection under state law. These areas are “state-designated nursery habitat” under the EFH or EFH-HAPC designations for penaeid shrimp, snapper grouper species, and coastal migratory pelagic species.

Designation	Regulation	Comments
North Carolina		
Inland Primary Nursery Areas	15A NCAC 10C .0503	
Primary Nursery Areas	15A NCAC 03R .0103	
Permanent Secondary Nursery Areas	15A NCAC 03R .0104	
Secondary Nursery Areas	15A NCAC 03R .0105	
Strategic Habitat Areas and Critical Habitat Areas	Coastal Habitat Protection Plan, Chapter 8	None as of November 30, 2010
Crab Spawning Sanctuaries	15A NCAC 03R .0110	
Oyster Sanctuaries	15A NCAC 03R .0117	
Outstanding Resource Waters	15A NCAC 02B .0225	
South Carolina		
Outstanding Resource Waters	DHEC R. 61-69	Only coastal counties included as state designated nursery grounds
Outstanding National Resource Waters	DHEC R. 61-68	None coastal as of November 30, 2010
Georgia		
Outstanding National Resource Waters	391-3-6-.03	None as of November 30, 2010
Florida		
Outstanding Florida Waters	62-302.700, F.A.C.	Only State Aquatic Preserves included as state-designated nursery grounds

State-Designated Nursery Areas—North Carolina:

Title 15A - Environment and Natural Resources of the North Carolina Administrative Code (NCAC) can be accessed at: <http://reports.oah.state.nc.us/ncac.asp?folderName=%5CTitle%2015A%20-%20Environment%20and%20Natural%20Resources>

State-Designated Nursery Areas—South Carolina:

In South Carolina, DHEC R. 61-69 designates Outstanding Resources Waters. Those estuarine Outstanding Resources Waters within coastal counties are state-designated nursery areas; the table below lists those estuarine Outstanding Resources Waters.

Waterbody	County	Description
Bass Creek	Beaufort	The entire creek tributary to May River
Bull Creek	Beaufort	The entire creek tributary to the Cooper River and May River
Callawassie Creek	Beaufort	The entire creek tributary to the Colleton River
Chechessee Creek	Beaufort	The entire creek tributary to the Colleton River and the Chechessee River
Colleton River	Beaufort	The entire stream tributary to the Chechessee River
Cooper River	Beaufort	The river from New River to Ramshorn Creek
May River	Beaufort	The entire stream tributary to Calibogue Sound

Okatie River	Beaufort	The entire river tributary to Colleton River
Sawmill Creek	Beaufort	The entire creek tributary to Colleton River
Adams Creek	Charleston	The entire creek tributary to Bohicket Creek
Bailey Creek	Charleston	The entire creek tributary to St. Pierre Creek
Big bay Creek	Charleston	The entire creek tributary to the South Edisto River
Bohicket Creek	Charleston	The entire creek tributary from North Edisto River to Church Creek
Bull's Bay	Charleston	The entire Bay
Bullyard Sound	Charleston	The entire Sound
Cape Romain Harbor	Charleston	The entire Harbor
Caper's Inlet	Charleston	The entire stream tributary to the Atlantic Ocean
Church Creek	Charleston	That portion of the creek from Wadmalaw Sound to Ravens Point
Copahee Sound	Charleston	The entire Sound
Dawho River	Charleston	The entire river from The South Edisto River to the North Edisto River
Fishing Creek	Charleston	From its headwaters to a point 2 miles from its mouth
Fishing Creek	Charleston	From a point 2 miles from its mouth to its confluence with St. Pierre Creek
Fishing Creek	Charleston	The entire creek tributary to Dawho River
Frampton Creek	Charleston	The entire creek tributary to Frampton Inlet
Frampton Inlet	Charleston	The entire inlet tributary to the Atlantic Ocean
Garden Creek	Charleston	The entire creek tributary to Toogoodoo Creek
Gibson Creek	Charleston	The entire creek tributary to Wadmalaw River
Intracoastal Waterway	Charleston	That portion of the waterway from Gibson Creek to the confluence of Wadmalaw Sound and Stono River
Intracoastal Waterway	Charleston	From Dawho River to Gibson Creek
Jeremy Inlet	Charleston	The entire inlet tributary to the Atlantic Ocean
Leadenwah Creek	Charleston	The entire creek tributary to the North Edisto River
Long Creek	Charleston	The entire creek tributary to Steamboat Creek
Lower Toogoodoo Creek	Charleston	From a point 3 miles from its mouth to its confluence with Toogoodoo Creek
Mark Bay	Charleston	The entire Bay
Mcleod Creek	Charleston	The entire creek tributary to the North Edisto River (Also called Tom Point Creek)
Milton Creek	Charleston	The entire creek tributary to St. Pierre Creek
Mud Creek	Charleston	The entire creek tributary to the South Edisto River
North Edisto River	Charleston	From its headwaters to the Intracoastal Waterway
North Edisto River	Charleston	From Steamboat Creek to the Atlantic Ocean
Ocella Creek	Charleston	The entire creek tributary to the North Edisto River
Oyster House Creek	Charleston	The entire stream tributary to Wadmalaw River
Price Inlet	Charleston	The entire stream tributary to the Atlantic Ocean
Privateer Creek	Charleston	The entire creek tributary to the North Edisto River
Russell Creek	Charleston	The entire creek tributary to Dawho River

Sand Creek	Charleston	The entire creek tributary to Steamboat Creek
Scott Creek	Charleston	The entire creek from Big Bay Creek to Jeremy Inlet
Shingle Creek	Charleston	The entire creek tributary to St. Pierre Creek
South Creek	Charleston	The entire creek tributary to Ocella Creek
St. Pierre Creek	Charleston	The entire creek tributary to the South Edisto River
Steamoat Creek	Charleston	The entire creek tributary to the North Edisto River
Store Creek	Charleston	The entire creek tributary to St. Pierre Creek
Swinton Creek	Charleston	The entire creek tributary to Lower Toogoodoo Creek
Tom Point Creek	Charleston	The entire creek tributary to the North Edisto River (Also Called McLeod Creek)
Toogoodoo Creek	Charleston	The entire creek tributary to the North Edisto River
Townsend River	Charleston	The entire river tributary to Frampton Inlet
Wadmalaw River	Charleston	The entire river from Wadmalaw Sound to the North Edisto River
Wadmalaw Sound	Charleston	The entire sound
Westbank Creek	Charleston	The entire creek tributary to the North Edisto River
Whooping Island Creek	Charleston	The entire creek tributary to Steamboat Creek
Edisto River	Charleston, Colleton	From U.S. 17 to its confluence with the Dawho River and the South Edisto River
South Edisto River	Charleston, Colleton	From Dawho River to Mud Creek
Alligator Creek	Colleton	The entire creek tributary to the South Edisto River
Mosquito Creek	Colleton	That portion of the creek from Bull Cut to the South Edisto River
Sampson Island Creek	Colleton	The entire creek tributary to the South Edisto River
Bass Hole Bay	Georgetown	The entire bay between Old Man Creek and Debidue Creek
Bly Creek	Georgetown	The entire creek tributary to Old Man Creek
Bob's Garden Creek	Georgetown	The entire creek tributary to Jones Creek
Boor Creek	Georgetown	The entire creek between Jones Creek and Wood Creek
Bread and Butter Creek	Georgetown	The entire creek tributary to Town Creek
Clambank Creek	Georgetown	The entire creek tributary to Town Creek
Cooks Creek	Georgetown	The entire creek between Old Man Creek and Debidue Creek
Crabhaul Creek	Georgetown	The entire creek tributary to Old Man Creek
Debidue Creek	Georgetown	That portion of the ck from confluence with Cooks Ck to North Inlet and all tidal cks including those on western shore between Bass Hole Bay & Cooks Ck
Duck Creek	Georgetown	The entire creek tributary to Jones Creek
Jones Creek	Georgetown	That portion of the creek from a point midway between its confluence with Duck Creek and Noble Slough to North Inlet
North Inlet	Georgetown	The entire inlet tributary to the Atlantic Ocean
North Santee River	Georgetown	From 1000 feet below the Intracoastal Waterway to the Atlantic Ocean
Old Man Creek	Georgetown	The entire creek tributary to Town Creek
Sea Creek Bay	Georgetown	The entire bay tributary to Old Man Creek

Sixty Bass Creek	Georgetown	That portion of the creek from a point 0.4 mile from its confluence with Town Creek to North Inlet
South Santee River	Georgetown	From 1000 feet below the Intracoastal Waterway to the Atlantic Ocean
Town Creek	Georgetown	That portion of the creek from its eastern confluence with Clambank Creek to North Inlet
Wood Creek	Georgetown	The entire creek between Boor Creek and Jones Creek
Little Pee Dee River	Horry, Marion	That portion from the confluence with Lumber River to the confluence with Great Pee Dee River

State-Designated Nursery Areas—Florida:

In Florida, Florida Administrative Code (F.A.C) 62-302.700 designates Outstanding Florida Waters. Those estuarine Outstanding Florida Waters that are Florida State Aquatic Preserves within estuarine waters are state-designated nursery areas; the table below lists those estuarine Outstanding Florida Waters, see F.A.C. 62-302.700 (9)(h). The Florida Department of Environmental Protection provides GIS data to show precise boundaries at: ocean.floridamarine.org/mrgis/Description_Layers_Marine.htm#management

Florida State Aquatic Preserve	County
Banana River (as mod. 8-8-94)	Brevard
Biscayne Bay (Cape Florida)	Miami-Dade and Monroe
Biscayne Bay (Card Sound) (12-1-82)	Miami-Dade and Monroe
Coupon Bight	Monroe
Fort Clinch State Park	Nassau
Guana River Marsh (8-8-94)	St. Johns
Indian River Malabar to Vero	Brevard, Palm Beach and Indian River
Indian River Malabar to Vero (additions)	Brevard, Palm Beach and Indian River
Indian River Vero Beach to Ft. Pierce (as mod. 10-4-90)	Indian River and St. Lucie
Jensen Beach to Jupiter Inlet (as mod. 10-4-90)	Martin, Palm Beach and St. Lucie
Lignumvitae Key	Monroe
Loxahatchee River-Lake Worth Creek (as mod. 8-8-94)	Martin and Palm Beach
Mosquito Lagoon	Volusia and Brevard
Nassau River-St. Johns River Marshes	Nassau and Duval
North Fork, St. Lucie	St. Lucie and Martin
Pellicer Creek	St. Johns and Flagler
Tomoka Marsh	Volusia and Flagler

Penaeid Shrimp EFH-HAPCs

- All coastal inlets
 - Coastal inlets include the throat of the inlet as well as shoal complexes associated with the inlets. Shoals formed by waters moving landward through the inlet are referred to as flood tidal shoals, and shoals formed by waters moving waterward through the inlet are referred to as ebb tidal shoals.
- All state-designated nursery habitats of particular importance to shrimp
- State-identified overwintering areas

Spiny Lobster EFH-HAPCs

- Florida Bay
- Biscayne Bay
- Card Sound
- Coral/Hard Bottom Habitat from Jupiter Inlet, Florida through the Dry Tortugas, Florida: In practice, the northern limit for inshore benthic habitats designated EFH for spiny lobster is Sebastian Inlet, the northern extent of the offshore benthic habitats designated as EFH for spiny lobster is the area offshore of the St. Johns River.

Dolphin-Wahoo EFH-HAPCs

Dolphin-Wahoo FMP, 2003

<http://www.safmc.net/Library/pdf/DolphinWahooFMP.pdf>

- The Point
- Ten-Fathom Ledge
- Big Rock
- Charleston Bump
- Georgetown Hole
- The Point off Jupiter Inlet
- The Hump off Islamorada, Florida
- The Marathon Hump off Marathon, Florida
- The “Wall” off of the Florida Keys
- Pelagic Sargassum

Comprehensive Ecosystem-Based Amendment 1 (2009)

<http://safmc.net/Library/pdf/CE-BA1%20FINAL%20%28Oct%202009%29.pdf>

Establishes deepwater coral HAPCs as Coral HAPCs (CHAPCs). Note that these are HAPCs according to criteria specified under the Coral FMP, and not the HAPC considerations identified under the EFH Final Rule (referred to as EFH-HAPCs). Deepwater Coral HAPCs were later also designated EFH-HAPCs through CEBA2 in 2012.

- Cape Lookout CHAPC
- Cape Fear CHAPC
- Stetson Reefs, Savannah and East Florida Lithoherms, and Miami Terrace CHAPC
- Pourtales Terrace CHAPC
- Blake Ridge Diapir CHAPC

Comprehensive Ecosystem-Based Amendment 2 (2012)

http://www.safmc.net/Library/pdf/CE-BA%20July%202015,%202011_Final.pdf

Deepwater Marine Protected Areas, established in Snapper Grouper Amendment 14, were also designated EFH-HAPCs for species in the snapper grouper complex.

- Snowy Grouper Wreck MPA
- Northern South Carolina MPA
- Edisto MPA
- Charleston Deep Artificial Reef MPA

- Georgia MPA
- North Florida MPA
- St. Lucie Hump MPA
- East Hump MPA

EFH-HAPCs for Golden tilefish:

- Irregular bottom comprised of troughs and terraces intermingled with sand, mud, or shell hash bottom
- Mud-clay bottoms in depths of 150-300 m

EFH-HAPCs for Blueline tilefish:

- Irregular bottom habitats along the shelf edge in 45-65 m depth, shelf break
- Upper slope along the 100fm contour (150-225 m)
- Hardbottom habitats characterized as rock overhangs, rock outcrops, manganese phosphorite rock slab formations, or rocky reefs in the South Atlantic Bight; and the Georgetown Hole (Charleston Lumps) off Georgetown, South Carolina

CEBA2 also amends the Coral FMP to also designate deep-water Coral HAPCs as EFH-HAPCs.

Amendment 8 to the SA FMP for Coral, Coral Reefs and Live/Hard Bottom Habitat

Expanded the regulatory boundaries of the Oculina Bank CHAPC, Stetson-Miami Terrace CHAPC and the Cape Lookout CHAPC all also previously designated as EFH-HAPCs.

<http://safmc.net/resource-library/coral-amendment-8>

The Council cooperatively developed with the Florida Wildlife Research Institute (FWRI), a Habitat and Ecosystem online mapping system to support Council and regional partners' efforts in the transition to EBM and presenting information on EFH.

Essential Fish Habitat and Essential Fish Habitat Areas of Particular Concern; SAFMC

EFH: (http://ocean.floridamarine.org/sa_efh/)

Spatial presentation of managed areas in the region; SAFMC Managed Areas:

(http://ocean.floridamarine.org/safmc_managedareas/)

The Council has continued its collaboration with FWRI in the now evolution to Web Services provided through the regional SAFMC Habitat and Ecosystem Atlas.

(http://ocean.floridamarine.org/safmc_atlas/) and the SAFMC Digital Dashboard

(http://ocean.floridamarine.org/safmc_dashboard/).

4. Caribbean Fishery Management Council

Implementing action: Comprehensive Amendment to the Fishery Management Plans of the U.S. Caribbean to Address the Magnuson-Stevens Fishery Conservation and Management Act, 2005

http://caribbeanfmc.com/fmp_sfa_amendment.html

Other references

- Final Environmental Impact Statement (text, tables and figures, appendices) (2004): http://caribbeanfmc.com/fmp_efh_feis.html
- EFH 5-Year Review (2011): (scroll to bottom for links to Volume I (text) and Volume II (figures and tables)) http://caribbeanfmc.com/fmp_efh.html

Reef Fish HAPCs: Confirmed spawning locations

Puerto Rico (4):

- Tourmaline Bank
- Abrir La Sierra Bank
- Bajo de Sico
- Vieques El Sico

St. Croix: (2):

- Mutton snapper spawning aggregation area
- East of St. Croix (Lang Bank)

St. John (2):

- Hind Bank Marine Conservation District
- Grammanik Bank

Reef Fish HAPCs: Areas of ecological importance to Caribbean reef species

Puerto Rico (11):

- Hacienda la Esperanza, Manatí
- Bajuras and Tiburones, Isabela
- Cabezas de San Juan, Fajardo
- JOBANNERR, Jobos Bay
- Bioluminescent Bays, Vieques
- Boquerón State Forest
- Pantano Cibuco, Vega Baja
- Piñones State Forest
- Río Espiritu Santo, Río Grande
- Seagrass beds of Culebra Island (nine sites designated as Resource Category 1 and two additional sites)
- Northwest Vieques seagrass west of Mosquito Pier, Vieques

St. Thomas (2):

- Southeastern St. Thomas, including Cas Cay, the Mangrove Lagoon and St. James Marine Reserves and Wildlife Sanctuaries
- Saba Island/Perseverance Bay, including Flat Key and Black Point Reef

St. Croix (5):

- Salt River Bay National Historic Park and Ecological Preserve and Marine Reserve and Wildlife Sanctuary

- Altona Lagoon
- Great Pond
- South Shore Industrial Area
- Sandy Point National Wildlife Refuge

Coral HAPCs: Areas of ecological importance to Caribbean coral species

Puerto Rico (13 total):

- Luis Peña Channel, Culebra
- Mona/Monito
- La Parguera, Lajas
- Caja de Muertos, Ponce
- Tourmaline Reef
- Guánica State Forest
- Punta Petrona, Santa Isabel
- Ceiba State Forest
- La Cordillera, Fajardo
- Guayama Reefs
- Steps and Tres Palmas, Rincón
- Los Corchos Reef, Culebra
- Desecheo Reefs, Desecheo

St. Croix (6 total):

- St. Croix Coral Reef Area of Particular Concern, including the East End Marine Park
- Buck Island Reef National Monument
- South Shore Industrial Area Patch Reef and Deep Reef System
- Frederiksted Reef System
- Cane Bay
- Green Cay Wildlife Refuge

5. Gulf of Mexico Fishery Management Council

Implementing action: Generic Amendment 3 for Addressing Essential Fish Habitat Requirements, Habitat Areas of Particular Concern, and Adverse Effects of Fishing in the Fishery Management Plans of the Gulf of Mexico, 2005

All EFH and HAPC actions are listed here:

http://www.gulfcouncil.org/fishery_management_plans/essential_fish_habitat.php

Current HAPCs

- Florida Middle Grounds
- Madison-Swanson Marine Reserve
- Tortugas North and South Ecological Reserves
- Pulley Ridge
- East and West Flower Garden Banks
- Stetson Bank
- Sonnier Bank

- MacNeil
- 29 Fathom Bank
- Rankin Bright Bank
- Geyer Bank
- McGrail Bank
- Bouma Bank
- Rezak Sidner Bank
- Alderice Bank
- Jakkula Bank

6. Western Pacific Fishery Management Council

Implementing actions: Amendment 6 to the Bottomfish and Seamount Groundfish Fisheries Management Plan, Amendment 8 to the Pelagic Fisheries Management Plan, Amendment 10 to the Crustaceans Fishery Management Plan, Amendment 4 to the Precious Corals Fisheries Management Plan, 1999.

<http://wpcouncil.org/documents/Magnuson.pdf>

HAPCs were originally identified in the context of species FMPs identified above. In 2009 the Council developed five new fishery ecosystem plans (American Samoa FEP, Mariana Archipelago FEP, Hawaii Archipelago FEP, Pacific Remote Island Area FEP, Pacific Pelagic FEP); EFH and HAPC descriptions were carried forward.

Current HAPCs:

- Pelagics: Water column down to 1000m that lies above seamounts and banks with summits shallower than 2,000 m.
- Bottomfish: All escarpments and slopes between 40-280m and three known areas of juvenile *Pristipomoides filamentosus* habitat.
- Precious corals: Makapu'u, Westpac, and Brooks Bank beds, and the Au'au Channel.
- Crustaceans: All banks within the Northwestern Hawaiian Islands, Mariana Archipelago, and American Samoa with summits shallower than 30m.
- Coral reef ecosystem: All MPAs identified in the FMP, all PRIAs, and many specific areas of coral reef habitat.

Coral reef ecosystem HAPCs

Implementing action: Fishery Management Plan for Coral Reef Ecosystems of the Western Pacific Region, 2001

<http://www.wpcouncil.org/coralreef/Coral%20Reef%20FMP.html>

See Table 6.6 for list of HAPCs, evaluation against HAPC considerations, and existing protected status

Northwestern Hawaiian Islands

- All substrate 0-10 fm
- Laysan: all substrate 0-50 fm
- Midway: all substrate 0-50 fm
- FFS: All substrate 0-50 fm

Main Hawaiian Islands:

- Kaula Rock (entire bank)
- Niihau (Lehua Island)

- Kauai (Kaliu Point)
- Oahu: Pupukea MLCD, Shark's Cove MLCD, Waikiki MLCD, Makapuu Head/Tide Pool Reef Area, Kaneohe Bay, Kaena Point, Kahe Reef
- Maui: Molokini, Olowalo Reef Area, Honolua-Mokuleia Bay MLCD, Ahihiki Kinau Natural Area Reserve
- Molokai (south shore reefs)
- Lanai: Halope Bay, Manele Bay, Five Needles
- Hawaii: Lapakahi Bay State Park MLCD, Pauko Bay and Reef MLCD, Kealakekua, Waiaiea Bay MLCD, Kawaihae Harbor-Old Kona Airport MLCD
- All long-term research sites
- All CRAMP sites

American Samoa

- Fagatele Bay
- Larsen Bay
- Steps Point
- Pago Pago (North Coast of Tutuila, National Park of American Samoa)
- Aunuu Island
- Rose Atoll
- South Coast Ofu (marine areas)
- Aua Transect – Pago Pago harbor, oldest coral reef transect
- Tau Island

Guam

- Cocos Lagoon
- Orote Point Ecological Reserve Area
- Haputo Point Ecological Reserve Area
- Ritidian Point
- Jade Shoals

CMNI

- Saipan (Saipan Lagoon)

US Pacific Remote Islands

- Wake Atoll
- Johnston Atoll
- Palmyra Atoll
- Kingman Reef
- Howland Island
- Baker Island
- Jarvis Island

HAPC candidates: Hawai'i Archipelago Bottomfish and Seamount Groundfish

Draft Amendment to the Hawai'i Archipelago Fishery Ecosystem Plan. Revised Descriptions and Identification of Essential Fish Habitat and Habitat Areas of Particular Concern for Bottom and Seamount Groundfish of the Hawaiian Archipelago.

http://www.wpcouncil.org/wp-content/uploads/2012/06/154CM_Action-Item_HI-BF-EFH.pdf

As recommended by the Western Pacific Stock Assessment Review (WPSAR) bottomfish working group and approved by the Council in 2012; secretarial decision anticipated in 2016.

- Kaena Point, Oahu
- Kaneohe Bay, Oahu
- Makapuu Point, Oahu
- Penguin Bank
- Pailolo Channel
- North Kahoolawe
- Hilo, Hawaii Island

The Council also recommended designating seamount groundfish HAPC to coincide with seamount groundfish EFH at Hancock Seamount, which is the water column and all bottom habitat in depths from the surface to 600 m bounded by the official US baseline and 600 m isobath, in waters within the EEZ that are west of 180° W and north of 28° N.

7. North Pacific Fishery Management Council

HAPCs identified in 2006

Implementing action: Amendments 65/65/12/7/8 to the BSAI Groundfish FMP, GOA Groundfish FMP, BSAI Crab FMP, Scallop FMP, and Salmon FMP.

Alaska Seamount Habitat Protection Areas: Dickens, Denson, Brown, Welker, Dall, Quinn, Giacomini, Kodiak, Odessey, Patton, Chirikof & Marchand, Sirius, Derickson, Unimak, and Bowers Seamounts.

Bowers Ridge Habitat Conservation Zone: Bowers Ridge, Ulm Plateau.

Gulf of Alaska Coral Habitat Protection Areas: Cape Ommaney 1, Fairweather FS1, Fairweather FS2, Fairweather FN1, Fairweather FN2.

Gulf of Alaska Slope Habitat Conservation Areas: Yakutat, Cape Suckling, Kyak Island, Middleton Island east, Middleton Island west, cable, Albatross Bank, Shumagin Island, Sanak Island, Unalaska Island.

<http://alaskafisheries.noaa.gov/analyses/efh/HAPCea0406.pdf> and
http://alaskafisheries.noaa.gov/habitat/efh/hapc/hapc_ak.pdf

Skate Nursery Areas HAPCs

Implementing action: Amendment 104 to the Fishery Management Plan for Groundfish of the Bering Sea and Aleutian Islands (2015 final rule).

Includes 6 areas of skate egg concentration: Bering 1, Bering 2, Bristol, Pribilof, Zhemchung, Pervenets.

References: <https://alaskafisheries.noaa.gov/sustainablefisheries/amds/amd104/bsai104fmptext.pdf> (includes table with coordinates) and http://alaskafisheries.noaa.gov/habitat/efh/hapc/hapc_ak.pdf

Additional information (total area, coordinates):

http://www.npfmc.org/wp-content/PDFdocuments/conservation_issues/HAPC/SkateHAPC_InitRev312.pdf

8. Pacific Fishery Management Council

With the exception of estuaries, none of the Pacific HAPCs have been comprehensively mapped, and some may vary in location and extent over time. For these reasons, the mapped extent of these areas is only a first approximation of their location.

Pacific Coast Groundfish HAPCs

Implementing action: Amendment 19 to the Pacific Coast Groundfish Fishery Management Plan (2005)

<http://www.pcouncil.org/groundfish/fishery-management-plan/fmp-amendment-19/>

Habitat type HAPCs:

- Estuaries
- Canopy kelp
- Seagrass
- Rocky reefs

HAPC sites: (“areas of interest”)

- Off of Washington: All waters and sea bottom in state waters shoreward from the three nautical mile boundary of the territorial sea shoreward to MHHW
- Off of Oregon: Daisy Bank/Nelson Island, Thompson Seamount, President Jackson Seamount
- Off of California: all seamounts, including Gumdrop Seamount, Pioneer Seamount, Guide Seamount, Taney Seamount, Davidson Seamount, and San Juan Seamount; Mendocino Ridge, Cordell Bank, Monterey Canyon; specific areas in the Federal waters of the Channel Island National Marine Sanctuary; specific areas of the Cowcod Conservation Areas

Salmon HAPCs

Implementing action: Amendment 18 to the Pacific Coast Salmon Plan (2015 final rule)

Reference: Appendix A to the Pacific Coast Salmon FMP: Identification and Description of Essential Fish Habitat, Adverse Impacts, and Recommended Conservation Measures for Salmon

http://www.pcouncil.org/wp-content/uploads/Salmon_EFH_Appendix_A_FINAL_September-25.pdf

Current HAPC habitat types (5):

- Complex channels and floodplain habitats
- Thermal refugia
- Spawning habitat
- Estuaries
- Marine and estuarine SAV

9. Atlantic Highly Migratory Species

Current HAPCs: Areas identified for two species; current HAPCs undergoing evaluation; new information for billfish larvae, sand tiger sharks, and lemon sharks would be evaluated to determine if HAPCs are warranted for these species in Amendment 10 to the Consolidated HMS Fishery Management Plan

Sandbar shark HAPC (1999) – under evaluation

Implementing action: Final Fishery Management Plan for Atlantic Tunas, Swordfish, and Sharks (1999)

http://www.nmfs.noaa.gov/sfa/hms/documents/fmp/tss_fmp/index.html

Sandbar shark HAPC: “Important nursery and pupping grounds have been identified in shallow areas and the mouth of Great Bay, NJ, lower and middle Delaware Bay, lower Chesapeake Bay, MD and near the Outer Banks, NC, in areas of Pamlico Sound adjacent to Hatteras and Ocracoke Islands and offshore those islands.”

See figure 5.51 of Amendment 1 to the Consolidated Atlantic HMS FMP (2006) for map. Also figure 14.1 of 5-Year Review (2015).

Spawning bluefin tuna HAPC (2009) – under evaluation

Implementing action: Amendment 1 to the 2006 Consolidated HMS Fishery Management Plan: Essential Fish Habitat (2009)

<http://www.nmfs.noaa.gov/sfa/hms/documents/fmp/am1/index.html>

Spawning bluefin tuna HAPC: “West of 86 degrees W longitude and seaward of the 100m isobaths, extending from the 100m isobaths to the EEZ.”

See figure 2.4 of Amendment 1 for map; also Figure 14.2 of 5-Year Review (2015)

Under Evaluation for Development of HAPCs (2015-present)

Final Essential Fish Habitat 5-Year Review for Atlantic Highly Migratory Species

http://www.nmfs.noaa.gov/sfa/hms/documents/2015_final_efh_review.pdf

Recommendations for additional HAPC evaluation during the development of Amendment 10 to the 2006 Consolidated HMS Fishery Management Plan (see p. 116)

- Lemon sharks: “high density lemon shark nursery within the Cape Canaveral – Jupiter Inlet region of southeastern Florida, and off Chandeleur Sound, Mississippi.”
- Sand tiger sharks: “important nursery grounds in Delaware Bay and the Cape Cod region”
- Billfishes: “Larval distribution of billfishes (blue and white marlin, sailfish, roundscale spearfish, and longbill spearfish) is the subject of ongoing research within the Florida Straits, Gulf of Mexico, and the U.S. Caribbean, suggesting that these areas could be considered primary spawning grounds for billfishes.”