U.S. Regional Fishery Management Councils

CONSERVING AND MANAGING THE FISHERIES OF THE UNITED STATES

An Evaluation of Conservation Areas in the U.S. EEZ

Prepared by the Council Coordination Committee (CCC)
Area-Based Management (ABM) Subcommittee

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Executive Summary

The Council Coordinating Committee (CCC) Area-Based Management (ABM) Subcommittee appreciates the opportunity to provide this report as tasked[1] by the CCC to enable it to provide meaningful input to the U.S. Department of Agriculture (USDA), Department of Interior (DOI) and the National Oceanic and Atmospheric Administration (NOAA) on the inclusion of fishery management areas into the America the Beautiful (ATB) effort. The information in this report represents the shared interests of the eight regional fishery management councils (Councils) around the country who, along with the Secretary of Commerce, manage fisheries in the U.S. Exclusive Economic Zone (EEZ) waters. This report is intended to recommend conservation areas in the EEZ for inclusion into the American Conservation and Stewardship Atlas (Atlas).

The Atlas has the potential to be a powerful tool to identify and track biodiversity, climate change mitigation and resilience, equitable access to nature and its benefits, and help managers improve the effectiveness of their conservation actions. It is critical to have an accurate baseline for the information it contains. Fishery management is a complex, flexible, public process which meets all of the stated conservation goals for the overarching ATB effort. It is important that the review for inclusion of these sites (i.e. conservation areas identified by the Councils) consider the complexities of fishery management and how it affects not only the conservation of species and supports biodiversity, but also impacts jobs, trade, underserved communities, recreational opportunities and the availability of healthy, sustainable seafood for American consumers.

This report is organized into seven sections followed by two appendices. First, an introduction section summarizing the Council process, U.S. fisheries and purpose of the report. Next, the recommended methods for identifying conservation areas, including criteria, and the effectiveness of the area management. Third, a synthesis of the conservation areas that exist in the U.S. EEZ by region and conservation category. This is followed by sections discussing the pros and cons of area-based approaches, a conclusion section summarizing the overall findings of this effort, and references and acknowledgement of the preparers of the report. The appendices provide additional supporting regional documentation, including detailed evaluation of the added conservation value provided by each area.

In order to develop this synthesis of information the CCC ABM Subcommittee first developed a definition of a conservation area, which is "an, *1) established, geographically defined area, with*

[1] The Subcommittee will assist the CCC with tracking and reacting to the 30 by 30 initiative and associated America the Beautiful efforts, and provide a report that includes: 1) A comprehensive evaluation of all existing EEZ Federal fishery area closures and other area based measures in the U.S. relative to the International Union for the Conservation of Nature (IUCN) criteria for marine protected areas "MPAs" and other effective area-based conservation measures (OECM), relative to the 30 by 30 initiative. This will assist each council in ensuring that the American Conservation and Stewardship Atas includes all appropriate and accurate information in their database, and, 2) A discussion of the pros and cons of area-based management, particularly with respect to adaptation to climate change and shifting stocks. Following the completion of this report, the Subcommittee will also prepare a manuscript/journal article on the conservation value of area-based measures for marine fisheries in the U.S.

2) planned management or regulation of environmentally adverse fishing activities, that 3) provides for the maintenance of biological productivity and biodiversity, ecosystem function and services (including providing recreational opportunities and healthy, sustainable seafood to a diverse range of consumers).” Using this definition, modeled after the ATB principles and a modified IUCN /OECM definition, the CCC has reviewed the sites using a standard methodology across the U.S. and recommends three different categories for consideration. Those are: Ecosystem Considerations (currently >55% of EEZ is conserved), Year-round Fishery Management (34% of EEZ conserved), and Seasonal Fishery Management/Other (5% of EEZ conserved) for 615 different conservation areas in total. The report also discusses some additional types of conservation measures that contribute to the U.S. being credited as having the most effective and sustainable fisheries management in the world.

By including these areas in the Atlas, the U.S. effectively demonstrates how the Councils’ fishery management measures under which federal fisheries operate across America directly result in improved conservation outcomes that benefit sustainable fisheries, other marine species, and habitats. Furthermore, it serves as an exhibit of U.S. leadership in fisheries management and illustrates the value of these measures as impactful conservation tools.

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1. Introduction

The Councils

The Magnuson-Stevens Fishery Conservation and Management Act (MSA), first passed in 1976, established a 200-mile EEZ and created eight regional fishery management Councils to manage our nation's marine fishery resources. These resources support recreational fisheries and a commercial seafood industry that boosts our economy by creating and sustaining U.S. jobs, ensures domestic food security, and provides safe and healthy seafood to all Americans. The MSA is unquestionably one of the most successful conservation laws in the world because of the unique deliberative Council process. Under the MSA, U.S. fisheries management is a publicly transparent and robust process of science, management, innovation, and collaboration with the fishing industry and other stakeholder groups. The Councils are intended to be more than simply 'advisory bodies' to the NOAA Fisheries; they were designed by Congress to allow for regional, participatory governance by knowledgeable people with a stake in fishery management and conservation of the marine ecosystem.

The Council's role as the drivers and developers of federal fishery management policy is administered through fishery management plans, and then implemented by NOAA Fisheries under specific responsibilities defined by statute. Councils in partnership with NOAA Fisheries manage U.S. fisheries to:

- Sustain, protect, and increase domestic seafood supply.
- Maintain and enhance recreational and subsistence fishing opportunities.
- Protect ecosystem health and sustainability.
- Create jobs, support related economic and social benefits, and sustain community resilience.

To meet these goals, Councils are required to use the best available science to maintain fish populations above certain levels (i.e., not overfished) and control harvest rates with catch limits to produce the maximum sustainable yields from those populations (i.e., not overfishing). The Council system gives fishery managers the flexibility to use local level input to develop stakeholder driven solutions to complex and dynamic fisheries management problems using the best scientific information available. Climate change is just one of many of those complex challenges that the Councils are working to address using innovative and stakeholder driven approaches. Area-based management is just one of numerous tools at the Council's disposal to conserve and sustainably manage fisheries and components of the marine ecosystem. The area-based approaches can be used to complement and enhance the system of sustainable catch limits and science-based decisions at the core of the U.S. federal fishery management process under the MSA.

U.S. Fisheries

Seafood demand is growing fast globally, and the United States is recognized as a global leader in sustainable seafood — both wild-caught and farmed.

In the 2020 *Status of the Stock* report, NOAA Fisheries reported that "sustainable fisheries increase the value of U.S. fisheries to the economy, support fishing communities, and maintain healthy marine ecosystems. U.S. commercial fisheries landed 9.3 billion pounds of seafood valued at $5.5 billion in 2019. Saltwater recreational fishing remains a key contributor to the national economy with anglers taking more than 187 million trips in 2019. Sound science, innovative management approaches, effective enforcement, meaningful partnerships, and public engagement are the core concepts that contribute to our success." This does not include the value-added effects through the U.S. economy, for shoreside infrastructure such as tackle and gear shops, boat and fuel sales, marinas, seafood processors and distributors, retail grocers, and restaurants.

Marine wild-capture fisheries in the United States are scientifically monitored, regionally managed, and effectively enforced under ten national standards of sustainability through the MSA, which exceeds the international standards for ecolabeling of seafood. In addition, NOAA Fisheries works to tackle seafood fraud at home, supports efforts to crackdown on illegal fishing abroad, and works to safeguard the health of seafood consumers. Both NOAA Fisheries and the Councils have demonstrated their effectiveness as stewards of these marine resources for the greatest benefit of the nation.

U.S. Federal fisheries operate under some of the world's most robust environmental protections, while still creating jobs, supporting resilient working waterfronts and coastal communities, and providing international trade opportunities. However, fishing communities, like all coastal communities, increasingly face acute threats from severe storms, flooding, and slow changes in sea level, temperature and acidification related to climate change. Over time, all of these factors may affect the social vulnerability and resilience of a community.

When developing fishery management regulations, NOAA Fisheries and the Councils consider environmental justice and climate resilience because it matters to the long range health of the industry and ultimately the U.S.. Communities dependent upon commercial fishing are far more likely to be poor, have a larger percentage of minority and tribal populations, and/or have residents with less "personal capacity" to respond to change, e.g., higher unemployment rates or lower educational attainment. Since 1994 under Executive Order (E.O.) 12898 and under the revisions of E.O. 14008, the Councils and NOAA Fisheries actions have considered approaches to addressing environmental justice, as well as the inter-related issue of climate vulnerability, and have worked to provide minority and low-income communities better access to public information and public participation.

Purpose of this Report

The Council Coordinating Committee (CCC) represents the shared interests of the eight regional fishery management Councils and consists of the chairs, vice chairs, and executive directors from each of the eight Councils. They meet to address and respond to issues relevant to all entities as they work to manage the most broadly distributed activity in the U.S. Federal waters — fishing. This report was prepared by the CCC ABM Subcommittee; this group was tasked with working to develop a common understanding among the Councils of area-based management measures to assist the Councils in coordinating with NOAA to achieve the goals set forth in the *America the Beautiful Report* (also called ATB) by identifying existing conservation areas that should be included in the American Conservation and Stewardship Atlas (Atlas) being developed. The Atlas has the potential to be a powerful tool to identify and track biodiversity, climate change mitigation and resilience, and equitable access to nature and its benefits and help managers improve the effectiveness of their conservation actions. It is critical to have an accurate baseline or starting point for the information it contains. This report is intended to address those information needs with respect to area-based management in the Councils and NOAA Fisheries purview.

Under the MSA, the Councils already apply a process and utilize the guidance of the ten national standards (i.e., communities, best available science) that adhere closely to the eight ATB key principles for conserving and restoring land and waters put forward in the report, "Conserving and Restoring America the Beautiful" (**Table 1**). For each of the conservation areas included in this analysis, an evaluation was conducted to determine whether the areas developed and recommended by the Councils are consistent with the principles outlined in the ATB Report. In all cases, the Council developed conservation areas aligned with at least 3 of the ATB Principles, and in most cases more.

Table 1. Alignment of America the Beautiful Report Principles with the Magnuson-Stevens Act (MSA) and its Council Process and National Standards.

Report Principle	America the Beautiful Principles	MSA/Council Process
1	Pursue a Collaborative and Inclusive Approach to Conservation	Councils, with NOAA fisheries, employ a collaborative and inclusive approach where fishing groups, stakeholders, and the public play an important role in working together to develop actions that conserve the health and productivity of marine resources. The Council itself has broad representation, as do numerous advisory bodies that support Council work. (A foundational requirement of the MSA).
2	Conserve America's Lands and Waters for the Benefit of All People	MSA requires that fishery management plans (FMPs) developed by the Councils are managed for the greatest net benefit of the nation. Council developed areas provide conservation of relatively undisturbed natural places in the U.S., which yield meaningful benefits to all Americans, including providing healthy sustainable protein that is available and affordable to a broad range of U.S. consumers. (MSA National Standard 1, 3, 4)
3	Support Locally Led and Locally Designed Conservation Efforts	The Council system is designed to provide regional, scale appropriate solutions to conservation issues. There are eight distinct Councils that develop unique conservation management strategies per local needs. The Councils operate through a stakeholder driven process, and some conservation areas are developed using locally led or locally designed conservation efforts. (MSA National Standard 3,6)

4	Honor Tribal Sovereignty and Support the Priorities of Tribal Nations	Some Councils have tribal nations that are directly engaged in their fishery management process (in regions in which these apply) and some conservation areas have been developed to support priorities of tribal nations and communities. (MSA National Standard 8)
5	Pursue Conservation and Restoration Approaches that Create Jobs and Support Healthy Communities	For conservation areas where limited commercial and/or recreational fishing occurs or benefits spillover into adjacent areas, the Councils work supports productive fisheries, creates jobs and recreational opportunities, and sustains vibrant working waterfronts and coastal communities. (MSA National Standard 7, 8)
6	Honor Private Property Rights and Support the Voluntary Stewardship Efforts of Private Landowners and Fishers	While the EEZ as a whole is owned by the nation (not private landowners as on land), the Councils work closely with fishermen and stakeholders in each region to ensure effective stewardship of these areas, fisheries, and the ecosystem as a whole. FMPs include fair and equitable access for commercial and recreational fishers that support stewardship and sustainability. (MSA National Standard 4)
7	Use Science as a Guide	Council actions are based on sound scientific principles and are required to use the best scientific data available. Councils are required to set catch limits at or below levels recommended by scientific advisory bodies. All Council developed conservation areas are established using the best scientific information available. (MSA National Standard 2)
8	Build on Existing Tools and Strategies with an Emphasis on Flexibility and Adaptive Approaches	FMPs use a variety of tools and strategies that are continually reviewed and adjusted through an adaptive stakeholder driven process. The Councils' process and actions are developed to be flexible and adaptive to adjust to a changing climate and availability of new scientific information. (MSA National Standard 2)

2. Identification of Conservation Areas: Methods

Definition of a Conservation Area

This document provides a summary of the use of one type of area-based approach, the identification of conservation areas in the U.S. EEZ based on information available as of March 31, 2022. For the purposes of this effort, the CCC ABM Subcommittee defined a conservation area as: 1) an established, geographically defined area, with 2) planned management or regulation of environmentally adverse fishing activities, that 3) provides for the maintenance of biological productivity and biodiversity, ecosystem function and services (including providing recreational opportunities and healthy, sustainable seafood to a diverse range of consumers).

Continuum of Conservation Areas

Conservation areas are established by the Councils for numerous reasons. Conservation areas are used to conserve aspects of the ecosystem and biodiversity, and may be developed with the objective of minimizing impacts to sensitive or important habitat types, (e.g., South Atlantic Council designated areas to protect deep-water coral and pelagic Sargassum from fishing gear impacts), conserve particularly biodiverse or special ecosystems (e.g., New England Council has restricted fishing in specific canyons and seamounts), or to conserve vulnerable keystone species (e.g., North Pacific Council has established Steller sea lion conservation areas). Conservation areas may also be used to address numerous other spatially driven fishery management challenges, such as spatial issues related to allocations or fishing access, catch limits, protect spawning fish from disturbance, or address bycatch concerns. Some of these measures may be implemented year-round while others may be implemented seasonally. Because many fish species are migratory, fish life stages may utilize different habitats/niches, and the fisheries themselves are mobile, seasonal closures can be a highly effective tool in terms of the application of targeted protection from activities and interactions which may only be occurring in certain places, at certain times, in the broad ocean space. It should be noted that many conservation areas can achieve conservation goals without prohibiting all fishing activity as the overall health of fish stocks and ecosystems are also managed through science-based annual catch limits for fisheries, fishing gear restrictions, and other tools to support and conserve marine habitat.

In many cases area-based conservation measures that are established to meet a specific objective or reduce impacts to a specific component of the ecosystem result in broader conservation benefits. For example, the New England Council uses area-based management to conserve juvenile cod, but those measures end up positively impacting numerous species that also use those habitats.

Many of the species managed by the Councils are highly mobile and utilize space that is not bound by the different state, federal, or even international jurisdictions. In addition to the area-based conservation measures implemented in federal waters by the Councils/NOAA Fisheries

under their authorities (i.e., the main focus of this report), it should be noted that other agencies also have authorities in federal waters that may impose restrictions on fishing activities within specific areas - this includes areas identified under the Antiquities Act of 1906 (54 U.S.C. §320301) which authorizes the President to proclaim national monuments on federal lands, the National Marine Sanctuaries Act (16 U.S.C. § 1431), and in some cases states have used their authorities to implement restrictions in portions of the EEZ (e.g. in the NPFMC region). The Councils also coordinate closely with State fishery management agencies because they regulate state water jurisdiction areas that are utilized by many of the federally managed species. Many of these other actions contribute significantly to creating the continuum of conservation measures and should be considered for the Atlas and ATB initiative.

Additional Conservation Measures that Cumulatively Contribute to Conservation

The Councils' process has demonstrated the value of a flexible approach, where designating and managing conservation areas are one tool among the suite of applied management measures that enable the most effective, targeted, stakeholder supported approaches to be developed.

In addition to conservation areas as defined in this report, the Subcommittee also recognizes there are many measures currently in place that provide conservation benefits that are not exclusively area based. Effective fishery management and conservation plans apply a variety of measures, and spatial closures are only one of numerous tools available to fishery managers.

Sustainable U.S. fisheries management relies heavily on output controls, or limits on the amounts of a fishery's resources that can be removed sustainably using a system of fishery catch limits that are grounded in strong scientific advice and quantitative stock assessment science. Other frequently used tools include bycatch quotas or caps (limits on non-targeted species or forage fish that can be caught), fish size regulations (minimums or maximums), effort controls which limit the amount of fishing activity, limits on the amount of fish landed per trip, and numerous gear modifications that impacts things like the sizes or types of fish caught in the fishing gear, reduce bycatch of non-targets or protected species (i.e., sea turtles, sponges, etc.), or effect the magnitude and intensity of fishing gear impacts on the seafloor. This matrix or continuum of conservation measures that has been developed for each fishery and under the Council fishery management and conservation plans creates system wide conservation benefits even if they are not considered site-specific spatial conservation measures.

In addition, there are numerous other statutes and processes that contribute to these efforts. Many of these do not necessarily meet the definition of "conservation area," but also continue to benefit the biodiversity for the marine and coastal environments and are part of a robust public science discourse across federal and state agencies.

Section 305 of the MSA requires NOAA Fisheries and the Councils to identify and conserve essential fish habitat for federally managed fish. Federal agencies, including the military and even other NOAA offices, must consult with NOAA Fisheries, and in some cases the Councils, on any

action that might adversely affect essential fish habitat. The Fish and Wildlife Coordination Act gives NOAA an important advisory role to review and comment on proposed federally permitted activities that could affect living marine resources. In addition, the Coastal Zone Management Act which includes a state-federal consistency provision that requires federal actions undertaken by federal agencies be consistent with enforceable policies of approved state management plans.

The cumulative impacts of all of these conservation measures, as well as these impactful statutes, on the ecosystem and biodiversity act in concert with conservation areas to produce positive impacts that are substantial. Therefore, the ATB process should not single out conservation areas as the only tool that provides beneficial impacts on the ecosystem and biodiversity; there are other conservation strategies that arguably have greater conservation benefits.

Criteria and Methods for Identifying and Evaluating Conservation Areas

The Councils' charge to the CCC ABM Subcommittee was to evaluate conservation areas established in the EEZ as 'other effective area-based conservation measures' (OECMs) based on the definitions and criteria described by the IUCN. The IUCN defines an OECM as:

> *A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the in situ conservation of biodiversity with associated ecosystem functions and services and where applicable, cultural, spiritual, socio–economic, and other locally relevant values.*

All Council established conservation areas clearly meet the requirements of a geographically defined area that are not listed as MPAs and all are governed and managed through regulations. Thus, areas were evaluated to determine if they provide "*positive and sustained long-term outcomes for the in-situ conservation of biodiversity with associated ecosystem functions and services".* The guidance establishes that OECMs should effectively protect one or more elements of native biodiversity, including but not limited to:

- Rare, threatened, or endangered species and habitats
- Representative natural ecosystems
- Areas with a high level of ecological integrity
- Range-restricted species and ecosystems in natural settings
- Important species aggregations, including during migration or spawning
- Ecosystems especially important for species life stages, feeding, resting, molting, and breeding

For example, the guidelines note that "Permanent or long-term fisheries closure areas designed to protect complete ecosystems for stock recruitment, to protect specialized ecosystems in their entirety, or protect species at risk through the in-situ conservation of biodiversity as a whole, and are demonstrated to be effective against fishery and non-fishery threats alike" would clearly qualify as OECMs. An OECM assessment is based on whether or not the area achieves its aims by

conserving ecosystems and habitats and maintaining or recovering viable populations of species in their natural surroundings.

The guidance also provides examples of how fishery closures may or may not qualify as OECMs. For example "Fishery closures, and other spatial fisheries management tools, including, but not limited to, fishing quotas or catch limits, temporary set asides or gear restriction areas with a single species, species group, or habitat focus, that may be subject to periodic exploitation and/or be defined for stock management purposes, and that do not deliver in-situ conservation of the associated ecosystems, habitats and species with which target species are associated" would not be considered as OECMs.

Additionally, the guidance notes that "Environmentally-damaging industrial activities and infrastructure development should not occur in OECMs. Environmentally-damaging industrial activities include, for example, industrial fishing and forestry, mining, oil and gas extraction, industrial agriculture, and environmentally damaging infrastructure…including those activities outside the area but impacting the OECMs." The IUCN's definition of 'industrial fishing' is defined as "(>12 m long x 6 m wide) motorized vessels, with a capacity of >50 kg catch/voyage, requiring substantial sums for their construction, maintenance, and operation and mostly sold commercially, and that all fishing using trawling gears that are dragged or towed across the seafloor or through the water column, and fishing using purse seines and large longlines.

While internationally we may be required to use these definitions for accounting, domestically we do not. The scale of fisheries, and the effectiveness of fisheries management programs, differ widely across the globe. Applying the same criteria to fisheries management and conservation areas to the U.S. to those of Sri Lanka, for example, is irrational and unrealistic. In the U.S., most commercial fisheries in the EEZ would be considered as industrial fisheries because they involve vessels over 12 m long that catch over 110 lbs. per trip. Additionally, unlike many other areas of the world, the U.S. actively manages fisheries to prevent overfishing and implements other effective measures to conserve biodiversity far beyond what can be achieved through conservation areas alone.

The IUCN guidance and definitions are not analogous with ATB goals. To rectify this, the Subcommittee evaluated EEZ areas based on the definition of a conservation area given above, the principles for conservation established in the ATB report, as well as modified criteria based on IUCN/OECM. These refined and specific evaluation criteria reflect the unique nature of conservation and management in the U.S. EEZ.

If an area meets 4 relatively straightforward steps to incorporate common characteristics and criteria for identification, then it satisfies the requirements of a conservation area (**Table 2**) and it is included in the synthesis of conservation areas that follows in the next section.

Tools: Worksheet and Effectiveness Checklist

Two tools have been developed by the CCC ABC Subcommittee to support this process. First, a worksheet to document how each area qualifies as a conservation area using a thorough, consistent, transparent process (**Table 3**). This worksheet is very similar to guidance provided by IUCN/OECM, merged with the principles outlined in the America the Beautiful Report. The worksheet is organized to be consistent with the 4 steps presented in the draft criteria in **Table 2**.

Identification of conservation areas is an important first step; however, evaluating and monitoring the effectiveness of a conservation area are also essential. Therefore, the Subcommittee has also developed an "effectiveness checklist," a second tool that identifies the primary elements relative to the effectiveness of fishery conservation areas (**Table 4**). Metrics such as enforceability, fishery exemptions permitted in an area, research and monitoring programs, stakeholder buy-in, and climate change adaptability are considered important elements for evaluating the effectiveness of a fishery conservation area. However, it is recognized that there are areas identified for conservation where enforcement, research, and monitoring, are limited or infeasible (e.g., Arctic circle, etc.).

If the checklist identifies elements that are not considered to be particularly effective – specific actionable strategies have been recommended to improve effectiveness. This tool can help categorize how federal agencies and managing partners can improve the conservation benefits of existing conservation areas. The Subcommittee recommends prioritizing actions to improve the conservation benefits of existing conservation areas over identifying new ATB conservation areas. The US EEZ already has numerous conservation areas and strengthening existing areas that have already been identified as important for conservation will likely have greater benefits compared to implementing additional conservation areas in new areas. The Subcommittee has completed draft worksheets and effectiveness checklists for conservation areas within the US EEZ. Appendix B includes two tables per conservation area organized by region.

Table 2. Criteria for identifying conservation areas in the US EEZ.

Step 1 Conservation Area Definition	**Does the area meet the working definition for a conservation area?** The criteria are broad and other agency criteria could be substituted [in brackets]. *A conservation area [as defined by the CCC ABM Subcommittee] is an: 1) established, geographically defined area, with 2) planned management or regulation of environmentally adverse fishing activities, that 3) provides for the maintenance of biological productivity and biodiversity, ecosystem function and services (including providing recreational opportunities and healthy, sustainable seafood to a diverse range of consumers).*	If yes, move to Step 2.
Step 2 Governance	**Who makes the management decisions for the area, what is the governance type? Are there clear boundaries? Who is the lead agency? Are multiple entities involved in management of the area? Are there effective means to control activities?** There are various governance types.[2] (Most of the governance types are federal or shared [developed by the Council and implemented by the federal government]. What are the specific boundaries, who is the lead agency and is there adequate enforcement?	If the area has clear boundaries and is managed by a governance body, move to Step 3.
Step 3 Objective / Category	**What is the primary objective of the area?** Conservation areas are developed for numerous reasons. These could include: 1) ecosystem conservation; 2) year-round conservation [fishery management]; and 3) seasonal conservation [fishery management] or other. Sub-categories for each objective could be identified to further categorize conservation areas.[3]	If the primary objective of the area meets one of the predefined categories, move to Step 4.
Step 4 ATB Principles	**Does the area meet some, ideally most, of the America the Beautiful (ATB) Principles?** Which ones does it meet? (See Table 4 below)	If the area meets some of the ATB Principles (at least 3), the area meets the required criteria of an ATB conservation area.

[2] Some governance types are federal government, shared or collaborative governance, private governance, or indigenous and local communities.

[3] For this exercise, the first conservation area objective - biodiversity or ecosystem conservation - has 4 sub-categories [habitat, vulnerable species, vulnerable ecosystem, biodiversity]. For year-round, seasonal, and other objectives, other subcategories were defined [bycatch, spawning, allocation, other].

Table 3. ATB Conservation Area Worksheet (template).

General Information	
Area name	
Implementation Action (Year)	
Regulations (with link of geographic area defined, if available)	
Size	
Number of areas (if applicable)	
Step 1 – Conservation Area Definition	
Criteria for Step 1	**Detailed explanation**
1a. Established, geographically defined area?	
1b. Planned management or regulation?	
1c. Provides for the maintenance of biological productivity and biodiversity, ecosystem function and services?	
Step 2 – Defining Governance	
Criteria for Step 2	**Detailed explanation**
2a. What is the governance type (federal government, shared or collaborative governance, private governance, or indigenous and local communities)?	
2b. Are the boundaries clear and well understood?	
2c. Who is the lead Agency?	
2d. Are there multiple entities involved in management of the area? If so, which ones?	
2e. Is enforcement of the area adequate?	
Step 3 – Category/Objective	
Criteria for Step 3	**Detailed explanation**

3a. For fishery conservation areas, three categories are recommended; which one best describes the candidate area best? 1) ecosystem conservation; 2) year-round fishery management; or 3) seasonal fishery management / other.	
3b. Which sub-category best describes the candidate area? For ecosystem conservation there are 4 sub-categories (habitat, vulnerable species, vulnerable ecosystem, biodiversity). For year-round/ seasonal fishery management or other areas there are 4 sub-categories (bycatch, spawning, allocation, other).	
Step 4 – America the Beautiful Principles	
Criteria for Step 4	**Detailed explanation**
4a. Does the area meet at least 3 of the America the Beautiful principles? Which ones?	
1. Pursue a Collaborative and Inclusive Approach to Conservation	
2. Conserve America's Lands and Waters for the Benefit of All People	
3. Support Locally Led and Locally Designed Conservation Efforts	
4. Honor Tribal Sovereignty and Support the Priorities of Tribal Nations	
5. Pursue Conservation and Restoration Approaches that Create Jobs and Support Healthy Communities	
6. Honor Private Property Rights and Support the Voluntary Stewardship Efforts of Private Landowners and Fishers	
7. Use Science as a Guide	
8. Build on Existing Tools and Strategies with an Emphasis on Flexibility and Adaptive Approaches	

Table 4. Effectiveness checklist for ATB conservation areas.

ATB Area Name				
ATB Area ID				
Number of areas (if applicable)				
Elements of Effectiveness	**Description of Effectiveness Elements**	**Yes/No/ Uncertain**	**Rationale**	**If "no" for effectiveness, specific action that could be taken to improve conservation benefits**
1. What [fishery] measures support conservation objectives?	Is fishing completely prohibited throughout the area? If not, which fishing gears are prohibited? If some fishing activity is allowed are there any limitations? Are there limits on recreational fishing?			
2. Other activities	Are other activities with potentially negative impacts on conservation prohibited within the area (e.g., mining, dumping, anchoring, oil and gas extraction, offshore energy activity, etc.)? If some are allowed within the area, are they limited? Are any activities anticipated to occur in the area in the near future (i.e. next 5 years) that are important to flag?			
3. Enforceability	Is the overall enforcement of the area effective? What are the enforcement approaches and specific [fishery] monitoring tools used for enforcement, who is responsible for enforcement, are there enforcement partnerships?			

4. Climate Change Resiliency	Can the conservation area adapt; is it resilient to climate change? Is the governance process nimble enough to adapt to uncertainty in an era of climate change? Can the area be modified relatively easily to incorporate new science?			
5. Stakeholder participation / Collaboration	Is there general support for the conservation area by regulated participants, other stakeholders, tribal or local communities, and regulators? Was the area developed in a collaborative way, is there overall support that the conservation area is effective and meeting objectives?			
6. Research/biological monitoring/restoration	Are there any biological monitoring programs in place now or when the area was adopted? Are any research programs planned to evaluate the conservation area in the short-term or long-term? Are there specific restoration efforts taking place or planned for the area?			
7. Public access	Are there opportunities for the public to access the conservation area for recreational opportunities? Are there specific programs in place to promote equitable access to the outdoors?			
8. Other elements of effectiveness	Are there other details about this conservation area that make it more, or less effective in terms of meeting conservation objectives? Are there aspects about the management program in this area that are important to note that are not captured in the topics above?			

3. Synthesis of Conservation Areas

For the purposes of this synthesis, conservation areas were broken into the following 3 groups based on the Councils' objectives for developing the conservation areas, and whether the areas are implemented "year-round" or "seasonally." It should be noted that in many cases, secondary impacts including benefits to other species and the ecosystem occur when these primary objectives are achieved. In addition, management measures that are applied universally in the regulations (i.e., throughout an entire Council region or NOAA region, in the EEZ) were not included as they did not meet the definition of conservation areas defined above, which includes having an "established, geographically defined area."

- **Ecosystem Conservation includes:**
  - Areas specifically designed to conserve habitat, biodiversity or special ecosystems, or vulnerable species.
  - Measures that are in place year-round; plus, ESA/MMPA protected species (e.g., special closures) that may be highly specific when species are present.
  - Special areas such as marine Monuments and Sanctuaries that restrict fishing activities.
- **Year-round Fishery Management includes:**
  - Areas designed to address spatially driven fishery management challenges (e.g., mortality reduction, stock rebuilding, allocation, catch limits, or bycatch concerns, etc.)
  - These measures are in place year-round.
- **Seasonal Fishery Management/Other includes:**
  - Areas designed to address spatially driven fishery management challenges, but these measures are in place seasonally (e.g., seasonally targeted spawning closures, allocation, or bycatch reduction measures).
  - In addition, other area-based conservation measures that do not fit in the other 2 categories are included here (e.g., Greater Atlantic Region has implemented clam dredging prohibitions for public health).

Throughout each Council region, many measures that do not specifically meet the definitions of "conservation areas" do in fact have meaningful conservation and protection value for ensuring sustainable fisheries, regional biodiversity, and ecosystem conservation (e.g., South Atlantic Council has a prohibition on the taking of live rock, including corals through its region). While these types of measures are not captured in the data tables in the Results below, they are noted in the Regional Profiles in Appendix A.

The data tables below, summarizes, by region and in sum, the number of established conservation areas, the amount of area covered in the EEZ (in nautical miles squared), and the area coverage with prohibitions of environmentally adverse fishing activities within the conservation areas to capture the coverage of those specific types of regulations. For the count of the number of areas, this included each conservation area with distinct boundaries, whether those areas have the same regulations, or differing regulations. For example, identical regulations implemented to conserve 4 submarine canyons with distinct boundaries would be counted as 4; as would 4 coral conservation areas that have distinct boundaries, but different levels of prohibition from activities in the regulations. For environmentally

adverse fishing activities, the data tables below summarize the area coverage of these regulatory protections in the regional Council conservation areas. It examines the coverage of the prohibitions of all bottom tending gears in any configuration that contact the seafloor (both mobile and fixed), coverage of prohibitions for mobile bottom tending gears (such as trawls and/or dredges), and whether those gear prohibitions are implemented annually or seasonally. Other gears may include those not listed above that may cause adverse impacts to the ecosystem (e.g., pelagic longlines); recreational gears would fall into this category. In addition, important prohibitions related to conservation, but that do not fit the conservation area criteria (e.g., such as prohibitions on the removal of live rock/corals) are noted in the Appendix A. **Table 5** provides the number of conservation areas established by each of the Councils that are categorized by the 3 criteria identified above, and by overall objective for the establishment of the area. **Table 6** summarizes the coverage of the conservation areas used in each Council region. The U.S. EEZ, in total, covers approximately 3.4 million nm2. The totals for each of the regions were not simply summed in this table or others, and account for any areas that may overlap within a Council region (i.e., areas were not double counted if they covered the same spatial area). **Tables 7 and 8** show the total area coverage (nm2) where fishing gear* is prohibited annually and seasonally, by region, in the U.S. EEZ.

Table 5. Number of Council established conservation areas, by objective* and region, in the U.S. EEZ. Note: All data are preliminary. N/A = not applicable. TBD = Unavailable.

Region	Ecosystem Conservation	Year-round Fishery Management	Seasonal Fishery Closures or Other	Total # (all areas)
New England	16	3	18	37
Mid Atlantic	5	19	6	30
South Atlantic	166	3	3	172
Caribbean	7	0	0	7
Gulf of Mexico	21	4	10	35
Pacific	76	15	9	100
North Pacific	193	19	2	214
Western Pacific	7	12	1	20
Total	**491**	**75**	**49**	**615**

*Ecosystem Conservation Areas are designed to conserve habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories.

Table 6. Regional coverage of conservation areas (nautical miles^2), by objective* and region, in the U.S. EEZ. Note: All data are preliminary. N/A = not applicable. TBD = Unavailable.

Region	Total area (nm^2) of U.S. EEZ	Ecosystem Conservation	Year-round Fishery Management	Seasonal Fishery Management or Other	Total % (all areas combined; no overlap)
New England	59,990	21,308	3,078	17,242	41,628 (69%)
Mid Atlantic	60,125	33,321	23	27,416	33,344 (55%)**
South Atlantic	143,806	19,763	71, 612	19,159	TBD***
Caribbean	59,982	48	N/A	N/A	48
Gulf of Mexico	182,738	691	168	295	1,153 (0.6%)
Pacific	237,677	208,923	14,713	N/A	88%
North Pacific	1,025,770	684,076	984,294	14,955	1,025,770 (100%)
Western Pacific	1,692,082	947,004	218,352	99,931	1,032,825(61%)
Total	**3,543,239**	**1,915,134 (54%)**	**1,220,628 (34%)**	**178,998 (5%)**	**>54%**

*Ecosystem Conservation Areas are designed to conserve habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories. **The seasonal/other category is not included in the total. ***Total may include some overlap with other areas.

Table 7. Total area coverage (nautical miles^2) where fishing gear* is prohibited year-round, by region, in the U.S. EEZ. Note: All data are preliminary. N/A = not applicable. TBD = Unavailable.

		Year-round, Total area (nm^2)			% of Region (no overlap)		
Region	**Total area (nm^2) of U.S. EEZ**	**All bottom tending gears***	**Bottom trawl or dredge**	**Other gears**	**All bottom tending gears**	**Bottom trawl or dredge**	**Other gears**
New England	59,990	23,434	N/A	N/A	39.1	N/A	N/A
Mid Atlantic	60,125	33,344	24,130	N/A	56.0	40.1	N/A
South Atlantic	143,806	33,279	19,763	29,899	23.1	13.7	20.8
Caribbean	59,982	48	59,982	N/A	0.1	100.0	N/A
Gulf of Mexico	182,738	858	N/A	N/A	0.5	N/A	N/A
Pacific	237,677	94,373	115,007	N/A	39.7	48.4	N/A
North Pacific	1,025,770	153,832	758,973	984,294	15.0	73.9	95.9
Western Pacific	1,692,082	1,692,082	1,692,082	932,894	100.0	100.0	55.1
Total	**3,543,239**	**2,031,250**	**2,669,937**	**1,947,087**	**57.3%**	**75.4%**	**55.0%**

*Bottom tending gear means a gear configuration that contacts the seafloor and includes all mobile bottom tending gear (such as bottom trawls and dredges) and fixed gears (such as pots/traps or longlines) that sit on bottom. Bottom trawling means trawl gear designed to contact the seafloor (i.e., not pelagic trawls). Dredge gear includes dredge configurations (e.g., scallop and clam toothed or hydraulic gear) that contact the seafloor. Other gears may include those gears not listed above that may impact components of the ecosystem (e.g., pelagic longlines, pelagic gillnets, rod and reel, spears, etc.).

Table 8. Total area coverage (nautical miles^2) where fishing gear* is prohibited seasonally, by region, in the U.S. EEZ. Note: All data are preliminary. N/A = not applicable. TBD = Unavailable.

		Seasonal, Total area (nm^2)			% of Region (no overlap)		
Region	**Total area (nm^2) of U.S. EEZ**	**All bottom tending gears**	**Bottom trawl or dredge**	**Other gears**	**All bottom tending gears**	**Bottom trawl or dredge**	**Other gears**
New England	59,990	N/A	8,737	10,058	N/A	14.6	16.8
Mid Atlantic	60,125	N/A	N/A	3,331	N/A	N/A	6.0
South Atlantic	143,806	9,750	N/A	9,408	6.8	N/A	6.5
Caribbean	59,982	N/A	N/A	32	N/A	N/A	0.1
Gulf of Mexico	182,738	295	N/A	N/A	0.2	N/A	N/A
Pacific	237,677	N/A	N/A	N/A	N/A	N/A	N/A
North Pacific	1,025,770	N/A	7,868	25,438	N/A	0.8	2.5
Western Pacific	1,692,082	N/A	N/A	99,931	N/A	N/A	6.0
Total	**3,543,239**	**10,045**	**16,605**	**148,198**	**0.3%**	**0.5%**	**4.2%**

*Bottom tending gear means a gear configuration that contacts the seafloor and includes all mobile bottom tending gear (such as bottom trawls and dredges) and fixed gears (such as pots/traps or longlines) that sit on bottom. Bottom trawling means trawl gear designed to contact the seafloor (i.e., not pelagic trawls). Dredge gear includes dredge configurations (e.g., scallop and clam toothed or hydraulic gear) that contact the seafloor. Other gears may include those gears not listed above that may impact components of the ecosystem (e.g., pelagic longlines, pelagic gillnets, rod and reel, spears, etc.).

4. Pros and Cons of Area-Based Approaches

There is much more to conserving marine biodiversity than just quantifying the total amount of sub areas that have been established to provide additional conservation, especially under a changing climate. Limits on the harvest of fish species -- and the conservation of fish habitat, marine mammals, and endangered species -- in 100% of the EEZ under the Councils'/NOAA Fisheries jurisdiction provides for the conservation of marine biodiversity far beyond what can be achieved through the conservation of just a portion of the ocean.

The biggest long-term threats to marine biodiversity in the U.S. are a warming ocean, increasing ocean acidity, invasive species, overexploitation, and pollution from land runoff (Fautin et al. 2010). Conservation areas will not be an effective tool to protect biodiversity or increase resilience to climate change in the face of these threats. For example, no conservation area is going to prevent warming water temperatures from reducing Pacific cod larvae survival or prevent coral bleaching, and no conservation area is going to reduce calcium shelled animals (such as crabs) from the impacts of ocean acidification. Addressing these problems will require reduced carbon emissions and other environmental stressors on a global scale, and a flexible regional approach to adaptively manage and mitigate direct and indirect human impacts on marine ecosystems. Environmental changes can alter ecosystem functions causing governance and management challenges, the types of future challenges the U.S. Congress anticipated when they created the Councils under the MSA.

The Councils have a tremendously diverse range of effective and innovative management tools, in addition to area-based measures, that support biological productivity and biodiversity, ecosystem function and services (including providing recreational opportunities and healthy, sustainable seafood to a diverse range of consumers). While the focus of this report is conservation areas developed by the Councils, the most effective means to address fisheries conservation challenges today and in the future is continued development of effective fisheries management measures through the MSA and the Council/NOAA Fisheries collaborative process. The Council process is in clear alignment with the ATB principles. In fact, through this process of reviewing evaluation criteria, the CCC ABM Subcommittee discovered that some types of conservation areas, such as national marine monuments, appear to be less consistent with ATB principles when compared to areas developed by the Councils. As described above in **Table 1**, the Council employs a highly engaging and regionalized process during the development of management measures, including conservation areas and their boundaries. The Council used best available science and can adapt those boundaries to meet emerging conservation challenges. The Councils are also equipped to make decisions with respect to the tradeoffs that occur around fishing access and enhanced opportunities for fishing communities, the public, and the benefits to the nation.

5. Summary

U.S. fisheries provide jobs and recreation and keep our coastal communities vibrant. Working closely with commercial, recreational, and small-scale tribal fishermen, the Councils together with NOAA Fisheries have rebuilt numerous fish stocks and developed some of the most sustainably managed fisheries in the world, some with the use of conservation areas and some without. Fishing and seafood production is crucially important to our coastal communities in terms of maintaining the longstanding cultural relationships of individuals, families, and their communities with the ocean and its natural resources- something very difficult to value but immensely important to the nation. Fishing and seafood production is also critically important in ensuring U.S. food security - something also difficult to value but critical to our nation.

The CCC ABM Subcommittee identified 615 conservation areas which cover greater than >54 percent of the total U.S. EEZ. In addition, at least 57.3 percent of the EEZ have prohibitions on all mobile bottom tending gears, and additional areas are conserved under differing levels of prohibitions and restrictions on fishing activity and other management measures. This means a large portion of the U.S. EEZ is conserved relative to environmentally adverse fishing activities.

This report has demonstrated that a broad range of approaches are needed to fulfill the multiple goals of conserving marine resources and ecosystems, while also supporting vibrant fishing communities. Climate change is introducing new challenges for fisheries management and flexibility will be critical moving forward. We have already observed major changes in the distribution of fish stocks as they move in response to warming ocean temperatures, and whole ecosystems are rapidly evolving in response. Inflexible, permanent area closures may not be the best solution to meet future conservation challenges. Flexible and adaptive responses will be required.

Both NOAA Fisheries and the Councils have demonstrated their effectiveness as stewards of the marine resources and marine ecosystems in the U.S. EEZ, by regulating how federal fisheries operate across America directly and creating improved conservation outcomes that benefit sustainable fisheries, other marine species, habitats, and communities. This report serves as an exhibit of effective U.S. leadership in fisheries management and illustrates the value of including these measures in the American Conservation and Stewardship Atlas to support the America the Beautiful effort.

6. References

Fautin D, Dalton P, Incze LS, Leong J-AC, Pautzke C, et al.. 2010. An Overview of Marine Biodiversity in United States Waters. PLoS ONE 5(8): e11914. doi:10.1371/journal.pone. 0011914

7. Preparers of the Document

This document was prepared collaboratively by the CCC ABM Subcommittee: Eric Reid - Subcommittee Chair (Also Chair of NEFMC), Deirdre Boelke (NEFMC), Jessica Coakley (MAFMC), Dr. Mark Fitchett (WPFMC), Dr. John Froeschke (GMFMC), Kerry Griffin (PFMC), Roger Pugliese (SAFMC), Miguel Rolon, and David Witherell (NPFMC), with support from NOAA Fisheries staff: Tim Haverland, Michelle Lennox, and Heather Sagar.

8. Appendices

Appendix A - Regional Profiles of Conservation Areas

The sections that follow provide a regional summary of conservation areas for each Council, as well as a map of those areas.

Also highlighted are some of the other types of measures that a region may use that do not qualify as conservation areas under the criteria but do contribute to overall conservation.

Please see the sections **Continuum of Conservation Areas** and **Additional Conservation Measures that Cumulatively Contribute to Conservation** that provide additional details on the types of measures the Councils and NOAA Fisheries utilize in their suite of fishery conservation and management tools under the MSA.

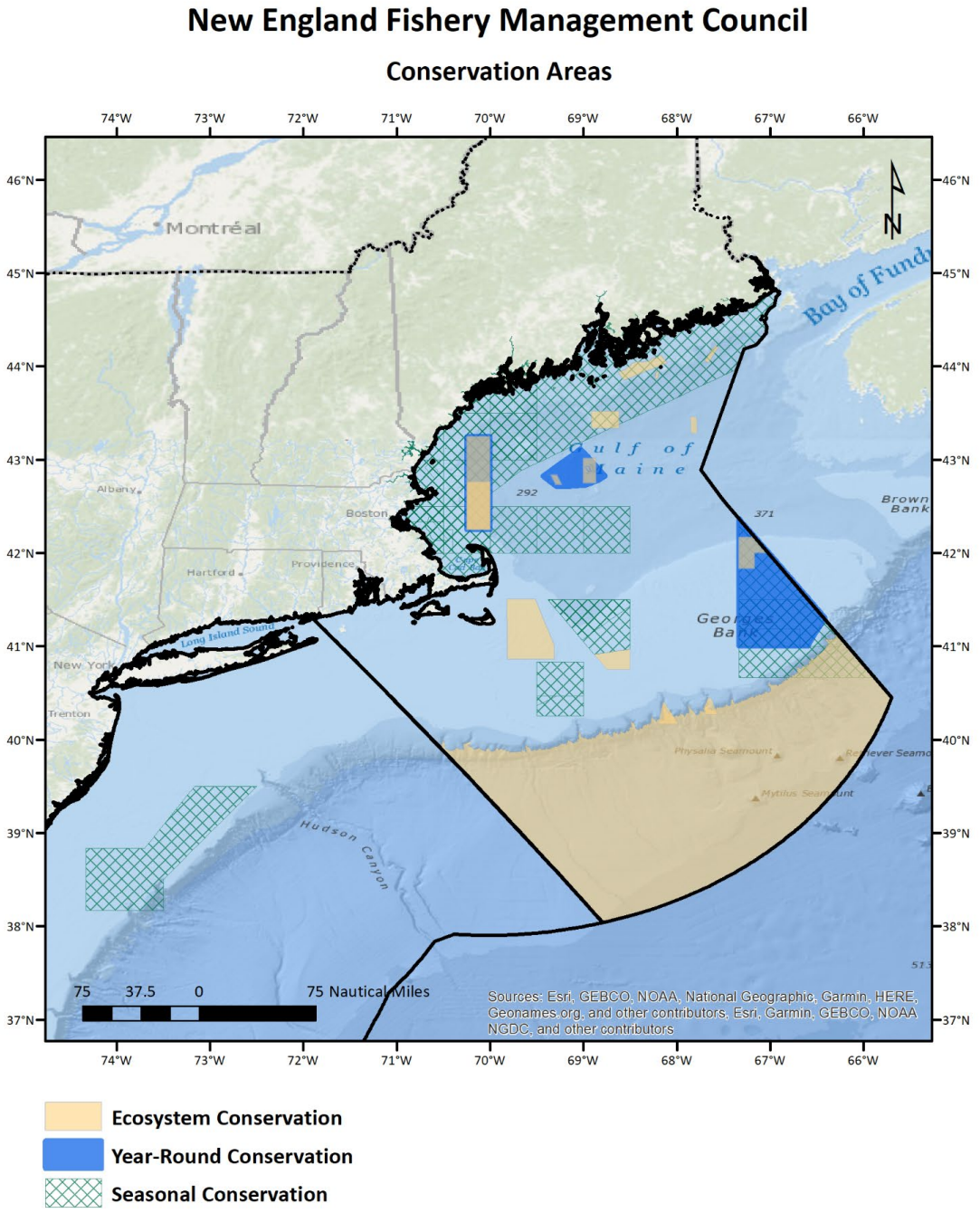
New England

The New England Council's management authority extends from three to 200 miles off the coasts of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut. The New England Council manages 29 species under nine fishery management plans (FMPs), including Atlantic sea scallops, New England multispecies or groundfish, Atlantic herring, skates, monkfish, whiting, and red crab. In addition, they utilize habitat/coral protection measures across all their plans and are working on a comprehensive ecosystem-based fishery management plan.

The New England Council has used area-based management as a fishery conservation tool for decades. Both year-round and seasonal measures have been in place for multiple reasons including spawning protection, habitat protection, to address gear conflicts, reduce bycatch, and as a general effort control measure to prevent overfishing. Many conservation areas in New England prohibit all mobile-bottom tending gears, while some are specific to one fishing gear type or specific fishery. Over the years the New England Council has adjusted the boundaries of many of the conservation areas in place based on new information and updated management objectives. In the most extreme case, the Atlantic Sea scallop plan uses an area-based management system that potentially adjusts conservation areas annually based on resource surveys. A patchwork of closed areas, limited access areas, and fully open areas are used throughout the entire resource area to prevent overfishing and increase yield per scallop by closing areas with high concentrations of small scallops and reopening those areas in a very controlled manner after several years when scallops have spawned and increased yield.

In addition to the conservation areas that have been included in the summary table and map in this section, there are dozens of other fishery measures in place that promote conservation of fishery resources and the ecosystem at large. Some of these are spatial in nature, some extend throughout the entire EEZ in the Northeast, and some are not spatial, but have direct conservation benefits. A summary of these important conservation measures is included in Appendix B.

Map of Conservation Areas in New England. Due to the overlap of fishing activities and the management of fisheries/fish stocks throughout their range in the Northeast U.S. EEZ, some areas shown in this map occur within the Mid-Atlantic Council management region.



New England Fishery Management Council

U.S. Regional Fishery Management Councils

New England Region Conservation Areas. Size is for individual areas and does not account for any overlaps, nor does it remove areas that may extend into or overlap with the Mid-Atlantic EEZ.

Type*		Focus	Area Names (# subareas)	Size (nm^2)	CFR	Prohibitions/Restrictions	ATB Principles Applied
NE 1-8	**Ecosystem Conservation**	All 4 sub-categories: conservation of habitat, vulnerable species, vulnerable ecosystems, and biodiversity	New England Habitat Management Areas (8)	2,000.9	Title50/ Chapter VI/ Part648/ SubpartQ/ § 648.370	All mobile bottom tending fishing gears are prohibited within these areas year-round, but static gears are allowed. Recreational fishing is permitted.	1, 2, 3, 5, 7, 8
NE 9-11	**Ecosystem Conservation**	All 4 sub-categories: conservation of habitat, vulnerable species, vulnerable ecosystems, and biodiversity	New England Dedicated Habitat Research Areas (DHRA) (3)	544.9	Title50/ Chapter VI/ Part648/ SubpartQ/ § 648.371	In the Stellwagen and Georges Bank DHRAs, all mobile bottom tending gears are prohibited but static gears are allowed. Recreational fishing is permitted in these areas.	1, 2, 3, 5, 7, 8
NE 12-14	**Ecosystem Conservation**	All 4 sub-categories: conservation of habitat, vulnerable species, vulnerable ecosystems, and biodiversity	New England Deep-sea Coral Protection Areas (3)	19,063.5	Title50/ Chapter VI/ Part648/ SubpartQ/ § 648.373	In the Mount Desert Rock and Outer Schoodic Ridge areas, all mobile bottom tending gears are prohibited but static gears are allowed. In the Georges Bank area, the use of all bottom tending commercial fishing gear (static and mobile) is prohibited. Red crab pots are exempted. Recreational fishing is permitted in all three areas.	1, 2, 3, 5, 7, 8

NE 15-17	**Year-round Fishery Mgmt.**	All 4 sub-categories: bycatch, spawning, allocation, other, in particular "other". The primary intent of these closures is to protect vulnerable groundfish stocks and the habitats those species utilize.	New England Year-round Groundfish Closed Areas (3)	3,077.9	Title50/ Chapter VI/ Part648/ SubpartF/ § 648.81	All fishing gears capable of catching groundfish are prohibited (lobster trap gear permitted), recreational fishing is permitted in Cashes and WGOM and prohibited in Closed Area II. Several tightly defined special access programs for healthy groundfish stocks permitted in Closed Area II starting in 2004, and limited scallop fishery access in portions of the area starting in 1999. Midwater trawl and purse seine gear are permitted in all three areas as exempted gear that catch very minimal amounts of groundfish as bycatch.	1, 2, 3, 5, 7, 8
NE 18-19	**Ecosystem Conservation**	All 4 sub-categories: conservation of habitat, vulnerable species, vulnerable ecosystems, and biodiversity	New England Monkfish Fishery Closed Areas (2)	124.2	Title50/ Chapter VI/ Part648/ SubpartG/ § 648.397	Fishing vessels on a Monkfish days-at-sea (DAS) are not allowed to be in these canyon areas.	1, 2, 3, 5, 7, 8
NE 20-26	**Seasonal Fishery Mgmt./Other**	All 4 sub-categories: bycatch, spawning, allocation, other; in particular "other" – intent to prevent overfishing and improve yield per recruit	New England Sea Scallop Rotational Areas (7)	7,135.1	Title50/ Chapter VI/ Part648/ SubpartD/ § 648.5	Action prohibits vessels fishing for scallops in these areas when they are closed scallop rotational areas. Areas typically close for 2-3 years then reopen for very limited fishing with scallop catch limits. Other commercial and recreational fishing can occur in these areas. Several of the scallop rotational areas include seasonal restrictions for scallop fishing when the area reopens to reduce bycatch of flatfish species.	1, 2, 3, 5, 7, 8

NE 27-31	**Seasonal Fishery Mgmt./Other**	2 of the sub-categories: bycatch and spawning	New England Northeast Multispecies Spawning Areas (5)	3,121.5	Title50/ Chapter VI/ Part648/ SubpartF/ § 648.81	These actions prohibit fishing gears capable of catching groundfish. There are specific exempted gears that vary per area to some degree and the seasons vary by area as well. For the most part recreational vessels can fish in these areas with pelagic hook and line gear provided catch is not sold (except for tuna). Scallop and MWT herring vessels are exempt from the seasonal closures.	1, 2, 3, 5, 7, 8
NE 32-36	**Seasonal Fishery Mgmt./Other**	2 of the sub-categories: bycatch and spawning	New England Northeast Multispecies Gulf of Maine Cod Protection Areas (5)	8,472.6	Title50/ Chapter VI/ Part648/ SubpartF/ § 648.81	These areas prohibit fishing gears capable of catching groundfish during certain seasons. Recreational vessels can fish in these areas provided catch is not sold (except for tuna). Some fisheries and gears are exempt from these restrictions.	1, 2, 3, 5, 7, 8
NE 37	**Year-round and Seasonal Fishery Mgmt./Other**	All 4 sub-categories: bycatch, spawning, allocation, other.	New England Herring Midwater Trawl Restricted Area	10,058	Title50/ Chapter VI/ Part648/ SubpartK/ § 648.20	Mid-water trawl gear is prohibited in this area seasonally (Jan-May). Other fishing gears are permitted to fish in this area. **	1, 2, 3, 5, 7, 8

*Ecosystem Conservation Areas are year-round to conserve habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories. ** The Atlantic States Marine Fisheries Commission also has management authority in this area, Herring Management Area 1A. That entity typically keeps this area closed to all herring fishing gears, not just mid-water trawl gear, in the same season (Jan-May) primarily for market/supply reasons. Therefore, in the end the area is effectively closed to all herring fishing for at least 5 months a year.

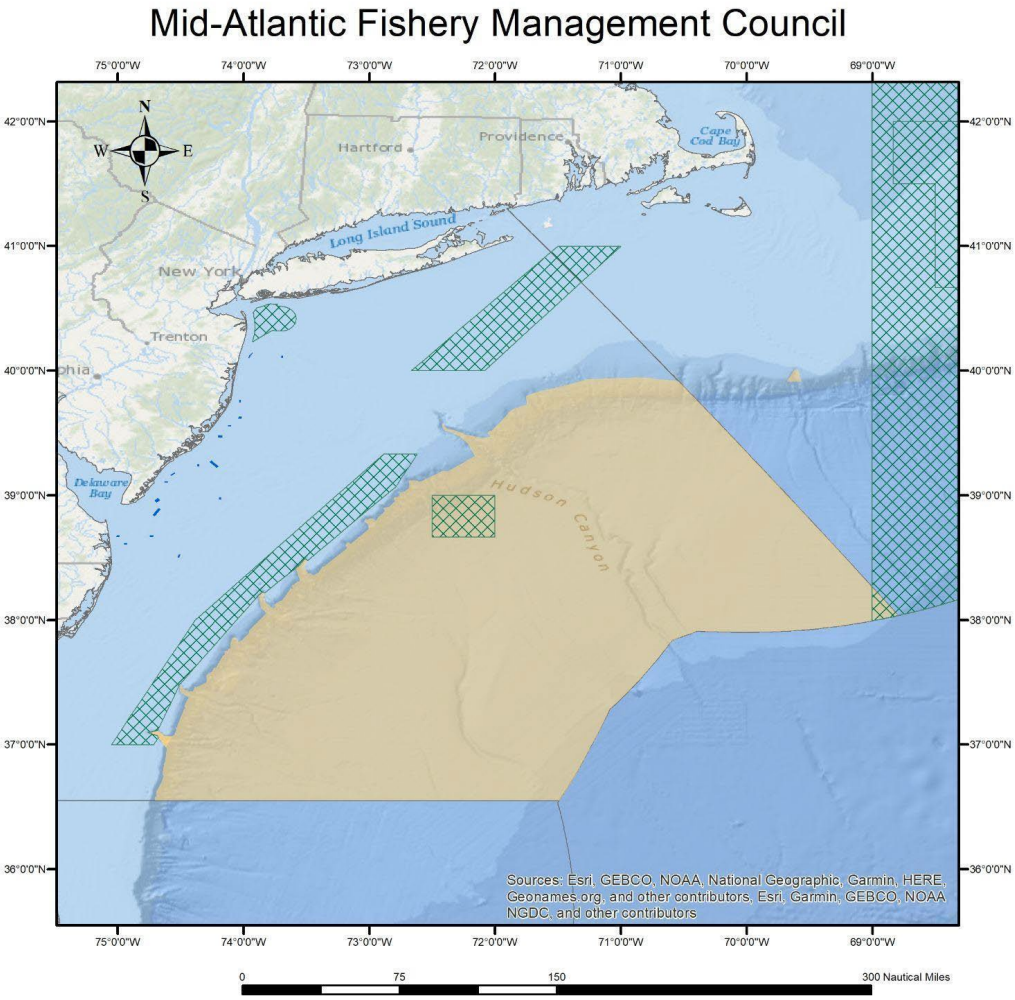
Mid Atlantic

The Mid-Atlantic Council's management authority extends from 3 to 200 miles off the coasts of New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia. Although the Mid-Atlantic Council includes voting members from North Carolina, the South Atlantic Council has primary management authority over federal waters off the coast of North Carolina. The Mid-Atlantic Council manages more than 65 species with seven fishery management plans (FMPs). Fifteen species are directly managed with specific FMPs. An additional 50+ forage species are managed as "ecosystem components," meaning that the Council can set possession and landing limits to prevent the expansion of directed fisheries on these species in the Mid-Atlantic. The Mid-Atlantic Council coordinates its management activities closely with several other management bodies, including the New England Fishery Management Council and the Atlantic States Marine Fisheries Commission, to ensure that fisheries are managed effectively across jurisdictional boundaries.

The Mid-Atlantic Council has implemented numerous conservation measures, to protect parts of the ocean from the impacts of fishing activities, such as the Frank R. Lautenberg Deep-Sea Coral Protection Area (the largest of the conservation areas developed by the Council). In addition to the conservation areas described in the table below, the Council utilizes numerous other fishery management tools such as catch limits that are grounded in strong scientific advice and quantitative stock assessment science, bycatch quotas or caps, fish size regulations (minimums or maximums), limits on the amounts of fish landed per trip, and numerous gear modifications. Of note, the Mid-Atlantic Council has implemented a Butterfish Mortality Cap for the Directed Longfin Squid Fishery and the Shad and River Herring Cap throughout the management region. With the butterfish mortality cap, the directed fishery in the EEZ closes for longfin squid when the NOAA Fisheries Regional Administrator projects that 95 percent of each Trimester's butterfish discard cap allocation has been harvested. For the shad and river herring cap, the Council used its discretionary authority under the MSA to conserve non-target species and to reduce the catch of RH/S and the Atlantic mackerel fishery in the EEZ closes when the Regional Administrator projects that 95 percent of the river herring/shad catch cap has been harvested.

In addition, the Council has taken other policy action to support resource conservation. The Council is implementing an Ecosystem Approach to Fisheries Management and has developed a series of Habitat Policies that articulate its positions on wind energy, offshore oil, marine transport, liquefied natural gas, and coastal development. By clearly communicating its positions, the Council can more effectively comment and collaborate with partners and other agencies to address these conservation threats.

Map of Conservation Areas in the Mid-Atlantic. Due to the overlap of fishing activities and the management of fisheries/fish stocks throughout their range in the Northeast U.S. EEZ, some areas shown in this map occur within the New England Council management region.



Legend

- Ecosystem Conservation
- Year-Round Fishery Management
- Seasonal Fishery Management/Other
- Fishery Management Council Regions

Mid Atlantic Region Conservation Areas. Size is for individual areas and does not account for any overlaps, nor does it remove areas that may extend into or overlap with the New England Region.

ID	Type	Focus	Area Names (# subareas)	Size (nm^2)	CFR	Prohibitions/Restrictions	ATB Principles Applied
MA1	**Ecosystem Conservation**	vulnerable ecosystem (deep-sea corals)	Frank R. Lautenberg Deep-Sea Coral Protection Area	33,321	50 CFR 648.372	Bottom-tending commercial fishing gear.	1,2,5,7,8
MA2	**Ecosystem Conservation**	habitat	Tilefish Gear Restricted Areas (4)	133	50 CFR 648.297	Bottom-tending mobile fishing gear.	1,2,5,7,8
MA3	**Year-round Fishery Mgmt.**	habitat	Mackerel, Squid, and Butterfish Bottom Trawling Restricted Areas (2)	124	50 CFR 648.23	No permitted mackerel, squid, or butterfish vessel may fish with bottom trawl gear.	1,2,5,7,8
MA4	**Year-round Fishery Mgmt.**	habitat	Delaware (4) and New Jersey Special Management Zone Areas for Recreational Fishermen (13)**	23	50 CFR 648.148	No person may fish in the Delaware Special Management Zones except by handline, rod and reel, or spear fishing (including the taking of fish by hand)	1,2,5,7,8

MA5	**Seasonal Fishery Mgmt./Other**	bycatch	Scup Gear Restricted Areas (2)	3,561	50 CFR 648.124	Prohibits vessels fishing for squid, black sea bass, or silver hake (also known as whiting) from using mesh smaller than the 5.0-inch (12.7-cm) minimum scup mesh size in the areas during certain times of year.	1,5,7,8
MA6	**Seasonal Fishery Mgmt./Other**	other	Atlantic Surfclam and Ocean Quahog Closed Areas (4)	28,902***	50 CFR 648.76	Clam dredging gear prohibited; public health closures implemented under RA Authority	5,7,8

*Ecosystem Conservation Areas are year-round to conserve habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories. ** Denotes adjacent state water prohibitions not captured in this table. *** Calculated by summing all areas (33,720 nm^2) and subtracting "open portion of the Georges Bank Closed Area" subject to paralytic shellfish poisoning (PSP) testing.

South Atlantic

The South Atlantic Fishery Management Council (Council), headquartered in Charleston, South Carolina, is responsible for the conservation of fish stocks, fish habitat and management of fisheries within the federal 200-mile limit of the Atlantic off the coasts of North Carolina, South Carolina, Georgia, and east Florida through the Florida Keys. The Council is responsible for a broad range of federally managed fisheries under eight individual fishery management plans. The Council currently manages 67 stock units through Fishery Management Plans (FMP) for Coastal Migratory Pelagics (mackerel & cobia); Coral, Coral Reefs and Live Hard Bottom Habitat; Dolphin and Wahoo; Golden Crab; Shrimp; Snapper Grouper; Spiny Lobster, and Pelagic Sargassum Habitat. Due to the migratory nature of some species, the Council designates management beyond the South Atlantic jurisdiction for dolphin/wahoo that are managed along the entire Atlantic east coast and mackerels/cobia that are managed through the Mid-Atlantic.

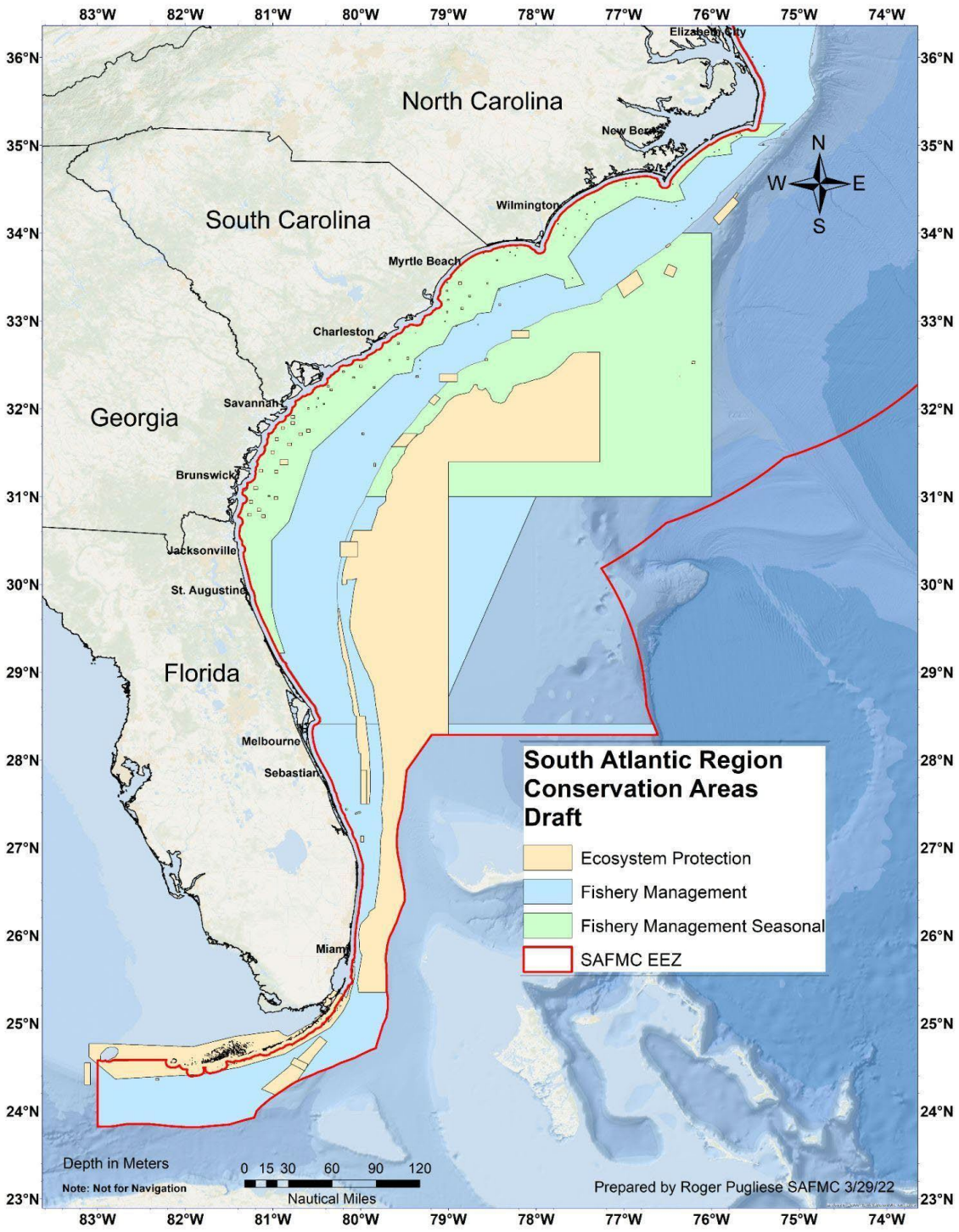
Under the guidance of the Magnuson-Stevens Act, the Council developed management measures through the FMPs to control unregulated harvest supporting Federal regulations to control harvest and rebuild stocks. The Council has focused more recently on implementation of annual catch limits and accountability measures working to end overfishing and rebuild economically important fish stocks. Of the species managed by the Council, only four are considered overfished, two undergoing overfishing and all are in the snapper grouper management complex.

The Council has established a suite of managed areas through multiple FMPs which, along with Federal designations of National Marine Sanctuaries, are included in the Ecosystem Conservation Areas presented in this report for the South Atlantic. In 1984, the Council banned destructive fishing gear in the world's first deepwater coral protected area, the Oculina Bank Habitat Area of Particular Concern (OHAPC). The designation, made in collaboration with fishermen and scientists, restricts destructive fishing gear in these sensitive habitats and adds another layer of protection against oil and gas exploration and other possible threats. The area was expanded in 2000 and 2014 to now cover the known range of the unique deepwater coral ecosystem in the region. Additional measures were also implemented in a portion of the OHAPC known as the Oculina Experimental Closed Area, to establish the first marine protected area where harvest of snapper grouper species was prohibited. Further research of deepwater coral habitats led to the Council's designation of five areas as Coral Habitat Areas of Particular Concern in 2010, with the areas encompassing more than 15,763 square nautical miles. The Council had also worked closely with stakeholders and scientists in designating eight Deepwater Marine Protected Areas (MPAs) which were implemented in 2009 to help protect long-lived, deepwater snapper grouper species and in March of 2016, established five Spawning Special Management Zones (SMZs), targeting specific habitat. Other conservation areas in the region were implemented by NOAA to reduce interactions of managed fisheries on threatened coral, and marine mammals and to address bycatch in pelagic fisheries.

Appendix B presents other regional habitat conservation and seasonal closures that have been implemented through FMPs which do not fit under the criteria for Conservation Areas. However, these implemented regulations provide significant additional layers of conservation of benthic and pelagic habitats and minimization of gear impacts from directed fisheries for managed species. In addition, Appendix B presents the Council's established allowable or authorized gear by FMP established in federal regulations for fisheries targeting managed species. These designations are intended to be proactive in prohibiting use of all other gear including bottom tending gears from being used in the directed harvest of most Council managed species.

Two of the Council FMPs are habitat-based plans with over 400 coral species and associated habitat conserved under the Coral, Coral Reefs and Live Hard Bottom Habitat FMP, and two species of the only structural pelagic habitat under the Pelagic Sargassum Habitat FMP. Management provides the Council the ability to address conservation of biodiversity and ecosystem function through protection of benthic and pelagic habitats essential to managed species in the region. This initially was accomplished by prohibiting harvest or retention of the resources through federal regulations established under these habitat FMPs (Appendix B). The Council, as mandated by the Magnuson-Stevens Act, designated Essential Fish Habitat (EFH) and Habitat Areas of Particular Concern (including all Council Managed Areas), and implemented gear regulations in all FMPs to reduce or eliminate the impact of fishing on managed species. In addition, EFH Conservation Policies were approved to address impacts of non-fishing activities on EFH and managed species. With the understanding of the interconnectivity of natural systems in the region, the Council has taken a comprehensive approach in which EFH designations ensure all life stages are addressed. In the South Atlantic, that entails designation of EFH which extends inshore considering many managed species are dependent on estuarine habitats or nearshore reef and live bottom habitats including state and Federal designated protection areas which the Council has designated as HAPCs. These areas should also be included in any review of Conservation Areas and development of the associated Atlas presenting them. To ensure the Council's designations are considered in the EFH Consultation process in the South Atlantic Region, an SAFMC EFH User Guide was developed in cooperation with NOAA Fisheries Habitat Conservation Division which is drawn on and distributed in the EFH Consultation and permit review process. The Council, viewing habitat conservation as the foundation in the move to ecosystem-based fishery management, facilitated the evolution of the Habitat Plan developed to support EFH designation, into the first Fishery Ecosystem Plan (FEP). FEP II was then developed as a living online information system presenting detailed updated information on species, habitat, fisheries and research including complexity and connectivity of South Atlantic food webs and the implications of climate variability and fisheries.

Map of Conservation Areas in the South Atlantic.



South Atlantic Region Conservation Areas. Size is for individual areas and does not account for any overlaps.

ID	Type*	Focus	Area Names (# subareas)	Size (nm2)	CFR	Prohibitions/Restrictions	ATB Principles Applied
SA1	**Ecosystem Conservation**	Deepwater Coral Habitat	Stetson Miami Terrace CHAPC	15,287.70	50/chapter-VI/part-622/subpart-K/section-622.224	Bottom longline, trawl, dredge, pot, or trap, anchor or grapple and chain, fishing for or possession of coral.	1,2, 5, 7, 8
SA2	**Ecosystem Conservation**	Deepwater Coral Habitat	Cape Lookout CHAPC	80.05	50/chapter-VI/part-622/subpart-K/section-622.224	Bottom longline, trawl, dredge, pot, or trap, anchor or grapple and chain, fishing for or possession of coral.	1,2, 5, 7, 8
SA3	**Ecosystem Conservation**	Deepwater Coral Habitat	Cape Fear CHAPC	34.12	50/chapter-VI/part-622/subpart-K/section-622.224	Bottom longline, trawl, dredge, pot, or trap, anchor or grapple and chain, fishing for or possession of coral	1,2, 5, 7, 8
SA4	**Ecosystem Conservation**	Deepwater Coral Habitat	Blake Ridge Diapir	1.98	50/chapter-VI/part-622/subpart-K/section-622.224	Bottom longline, trawl, dredge, pot, or trap, anchor or grapple and chain, fishing for or possession of coral	1,2, 5, 7, 8

SA5	**Ecosystem Conservation**	Deepwater Coral Habitat	Pourtales Terrace	359.59	50/chapter-VI/part-622/subpart-K/section-622.224	Bottom longline, trawl, dredge, pot, or trap, anchor or grapple and chain, fishing for or possession of coral	1,2, 5, 7, 8
SA6	**Ecosystem Conservation**	Deepwater Coral Habitat	Oculina Bank HAPC	481.64	50/chapter-VI/part-622/subpart-K/section-622.224	Bottom longline, trawl, dredge, pot, or trap, anchor or grapple and chain, fishing for or possession of coral	1,2, 3, 5, 7, 8
SA7	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	Snowy Grouper Wreck MPA	126.67	50/chapter-VI/part-622/subpart-I#622.183	No fishing or possession of any snapper grouper species.	1,2, 3, 5, 7, 8
SA8	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	Northern South Carolina MPA	44.94	50/chapter-VI/part-622/subpart-I#622.183	No fishing or possession of any snapper grouper species.	1,2, 3, 5, 7, 8
SA9	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	Edisto MPA	50.55	50/chapter-VI/part-622/subpart-I#622.183	No fishing or possession of any snapper grouper species.	1,2, 3, 5, 7, 8

SA10	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	Charleston Deep Artificial Reef MPA	20.8	50/chapter-VI/part-622/subpart-I#622.183	No fishing or possession of any snapper grouper species.	1,2, 3, 5, 7, 8
SA11	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	Georgia MPA	66.91	50/chapter-VI/part-622/subpart-I#622.183	No fishing or possession of any snapper grouper species.	1,2, 3, 5, 7, 8
SA12	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	North Florida MPA	90.05	50/chapter-VI/part-622/subpart-I#622.183	No fishing or possession of any snapper grouper species.	1,2, 3, 5, 7, 8
SA13	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	St. Lucie Hump MPA	6.21	50/chapter-VI/part-622/subpart-I#622.183	No fishing or possession of any snapper grouper species.	1,2, 3, 5, 7, 8
SA14	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	East Hump MPA	41.46	50/chapter-VI/part-622/subpart-I#622.183	No fishing or possession of any snapper grouper species.	1,2, 3, 5, 7, 8

SA15	**Ecosystem Conservation**	Vulnerable species - Snapper Grouper	Oculina Bank Experimental Closed Area	70.77	50/chapter-VI/part-622/subpart-K/section-622.224	In addition to HAPC regulations – No fishing for snapper and grouper species.	1,2, 3, 5, 7, 8
SA16	**Ecosystem Conservation**	Snapper Grouper Spawning	South Cape Lookout Spawning SMZ	3.34	50/chapter-VI/part-622/subpart-I	Fishing for and/or possessing snapper grouper species	1,2, 3, 5, 7, 8
SA17	**Ecosystem Conservation**	Snapper Grouper Spawning	Devils Hole Spawning SMZ	1.99	50/chapter-VI/part-622/subpart-I	Fishing for and/or possessing snapper grouper species	1,2, 3, 5, 7, 8
SA18	**Ecosystem Conservation**	Snapper Grouper Spawning	Area 51 Spawning SMZ	1.98	50/chapter-VI/part-622/subpart-I	Fishing for and/or possessing snapper grouper species	1,2, 3, 5, 7, 8
SA19	**Ecosystem Conservation**	Snapper Grouper Spawning	Area 53 Spawning SMZ	1.93	50/chapter-VI/part-622/subpart-I	Fishing for and/or possessing snapper grouper species	1,2, 3, 5, 7, 8
SA20	**Ecosystem Conservation**	Snapper Grouper Spawning	Warsaw Hole Spawning SMZ	2.34	50/chapter-VI/part-622/subpart-I	Fishing for and/or possessing snapper grouper species	1,2, 3, 5, 7, 8

SA21-SA80	**Ecosystem Conservation**	Vulnerable species - Spiny Lobster	Lobster Gear Closed Areas (60)	4.43	50/chapter-VI/part-622#622.406	Fishing with spiny lobster trap gear is prohibited year-round in these areas.	1,2, 3, 5, 7, 8
SA81- SA 110	**Ecosystem Conservation**	Habitat/ enhanced fishery opportunity	32 SMZs off South Carolina	28.32	50/chapter-VI/part-622/subpart-I#622.182	Limited angling activities to handheld gear—handline, rod and reel and spear (excluding powerheads)—and harvest of snapper grouper species with allowable gear to the applicable recreational bag limits.	1,2, 3, 5, 7, 8
SA 111 – SA 142	**Ecosystem Conservation**	Habitat/ enhanced fishery opportunity	30 SMZs off North Carolina	5.99	50/chapter-VI/part-622/subpart-I#622.182	Harvest of snapper grouper species would only be allowed with handline, rod and reel, and spear. All harvest by spear would be limited to the applicable recreational bag limit.	1,2, 3, 5, 7, 8
SA 143 – SA 161	**Ecosystem Conservation**	Habitat/ enhanced fishery opportunity	19 SMZs off Georgia	27.11	50/chapter-VI/part-622/subpart-I#622.182	Fishing may only be conducted with handline, rod and reel, and spearfishing gear. Use of a sea bass pot or bottom longline is prohibited. South Atlantic snapper-grouper taken with a powerhead is limited to the bag limits.	1,2, 3, 5, 7, 8

SA 162	**Ecosystem Conservation**	Habitat/ enhanced fishery opportunity	Ft. Pierce Offshore Reef SMZ	2.78	50/chapter-VI/part-622/subpart-I#622.182	Powerhead, sea bass pot, bottom longline, hydraulic, or electric reel permanently affixed to the vessel when fishing for snapper-grouper.	1,2, 3, 5, 7, 8
SA 163	**Ecosystem Conservation**	Habitat/ enhanced fishery opportunity	Key Biscayne/Artificial Reef-H SMZ	1.54	50/chapter-VI/part-622/subpart-I#622.182	Use of a sea bass pot or bottom longline is prohibited.	1,2, 3, 5, 7, 8
SA 164	**Ecosystem Conservation**	Vulnerable species - Sanctuary Resources	Florida Keys National Marine Sanctuary	2,900.00	Title-15/subtitle-B/chapter-IX/subchapter-B/part-922	Prohibits: using any fishing gear except rod and reel, and handline gear, oil exploration, mining, activity that would alter the seafloor and restricting large shipping traffic, anchoring on, touching, and collecting coral.	1,2, 3, 4, 5, 6, 7, 8
SA 165	**Ecosystem Conservation**	Vulnerable species - Sanctuary Resources	Grays Reef National Marine Sanctuary	16.61	title-15/part-922/subpart-i	Using any fishing gear within the Sanctuary except rod and reel, and handline gear.	1,2, 3, 5, 7, 8

SA 166	**Ecosystem Conservation**	Vulnerable species - Sanctuary Resources	Monitor National Marine Sanctuary	.785	CFR-2012-title15-vol3/CFR-2012-title15-vol3-part922	Trawling, anchoring; stopping, drifting; subsurface salvage or recovery; Diving or submersible; grappling, suction, conveyor, dredging, or wrecking device; Detonating underwater any explosive; Drilling or coring the seabed; Lowering, laying, or raising seabed cable; or Discharging waste material.	1,2, 3, 5, 7, 8
SA 167	**Year-round Fishery Mgmt./Other**	Vulnerable species - Dolphin and Wahoo	East Coast Florida Pelagic Longline Closed Area	29,898.97	50/chapter-VI/part-622#622.274	If pelagic longline gear is on board a vessel, a person aboard such vessel may not fish for or retain a dolphin or wahoo in the East Florida Coast closed area.	1,2, 3, 5, 7, 8
SA 168	**Year-round Fishery Mgmt./Other**	Vulnerable species - Snapper Grouper	Longline Prohibited Area	27614.18	50/chapter-VI/part-622/subpart-I#622.182	Use of longline to fish for snapper-grouper south of 27°10′ N. lat.; or north of 27°10′ N. lat. where the charted depth is less than 50 fathoms (91.4 m).	1,2, 7, 8
SA 169	**Year-round Fishery Mgmt./Other**	Vulnerable species - Snapper Grouper	Sea Bass Pot Prohibited Area	14,098.43	50/chapter-VI/part-622/subpart-I#622.182	A sea bass pot may not be used in the South Atlantic EEZ south of 28°35.1′ N. lat. (due east of the NASA Vehicle Assembly Building, Cape Canaveral, FL).	1,2, 3, 5, 7, 8

SA 170	**Seasonal Fishery Management/ Other**	Vulnerable species - Black Sea Bass	Commercial Black Sea Bass Pot Closure	9,750.09	50/chapter-VI/part-622/subpart-I/section-622.189#p-622.189(g)	Commercial Black Sea Bass Pot Closure November 1-30 and April 1-30	1,2, 5, 7, 8
SA 171	**Seasonal Fishery Management/ Other**	Vulnerable species - Black Sea Bass	Commercial Black Sea Bass Pot Closure	9,750.09	50/chapter-VI/part-622/subpart-I/section-622.189#p-622.189(g)	Commercial Black Sea Bass Pot Closure December `1 – March 31	1,2, 5, 7, 8
SA 172	**Seasonal Fishery Management/ Other**	Vulnerable species - Dolphin and Wahoo	Charleston Bump Pelagic Longline Closed Area	9,408.79	50/chapter-VI/part-622	If pelagic longline gear is on board a vessel, a person aboard such vessel may not fish for or retain a dolphin or wahoo in the Charleston Bump closed area from February 1 through April 30.	1,2, 3, 5, 7, 8

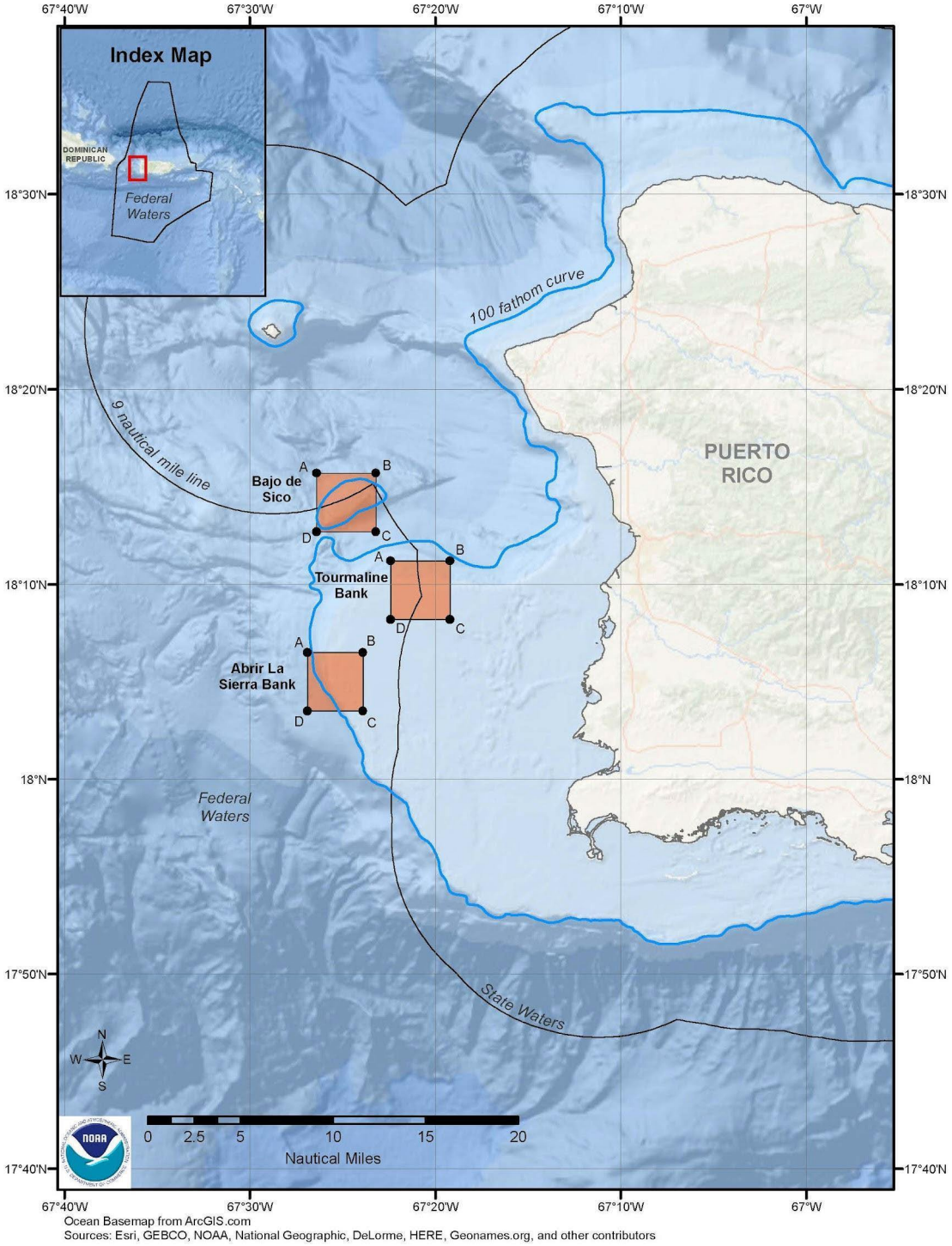
*Ecosystem Conservation Areas are year-round to conserve habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories.

Caribbean

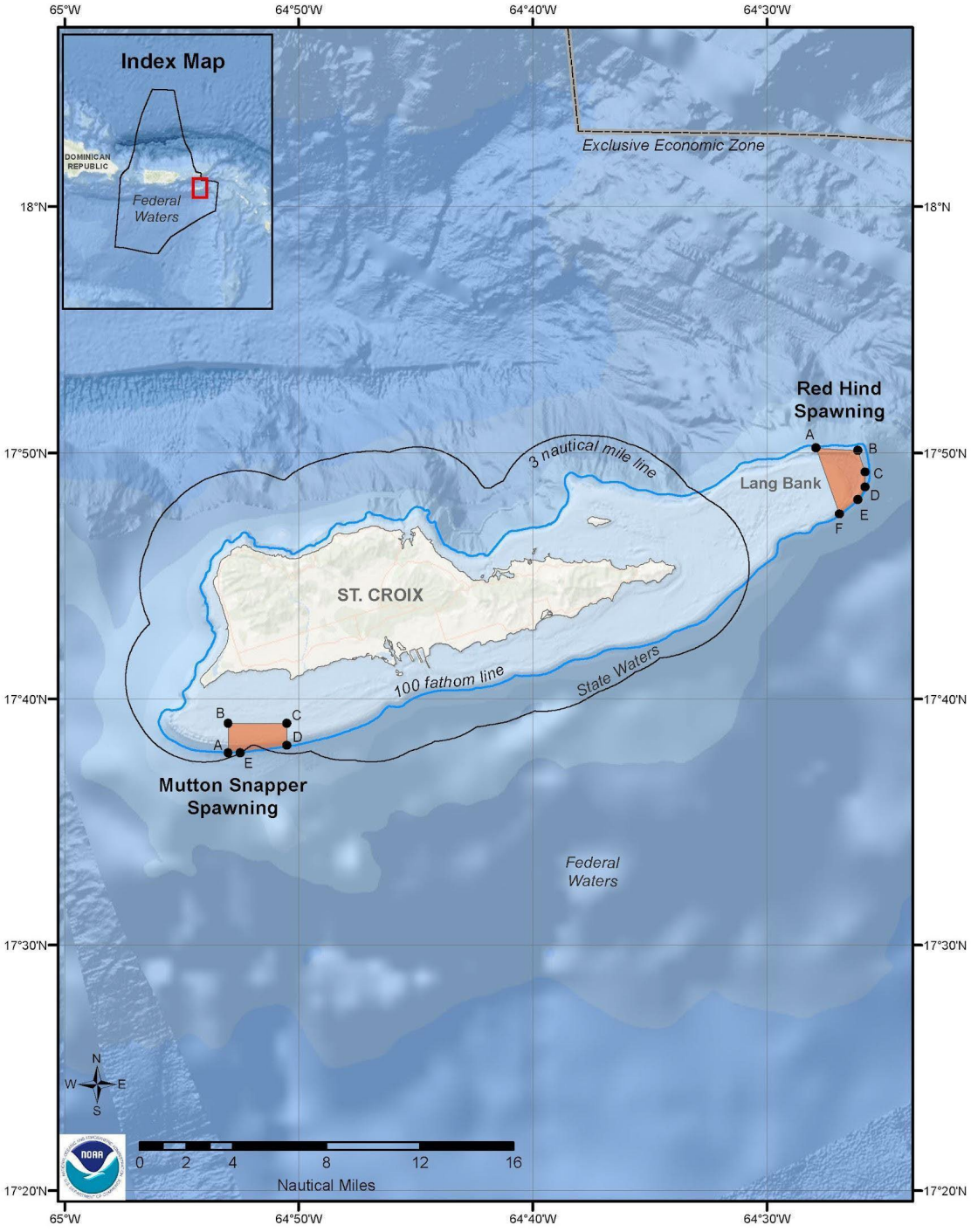
The CFMC area of jurisdiction includes the EEZ off Puerto Rico (9-200nms) and the USVI (3-200nms) in the US Caribbean. Three Island-Based FMPs have been approved, which includes spiny lobster, queen conch, reef fishes, as well as pelagic species such as dolphinfish and wahoo, among others in the management units. The FMPs include management measures to protect spawning aggregation areas by closing these during the spawning season of groupers, snappers and other species that exhibit this strategy for reproduction.

Maps of Conservation Areas in the Caribbean.

Reef Fish Closures - Bajo de Sico, Tourmaline Bank & Abrir la Sierra Bank

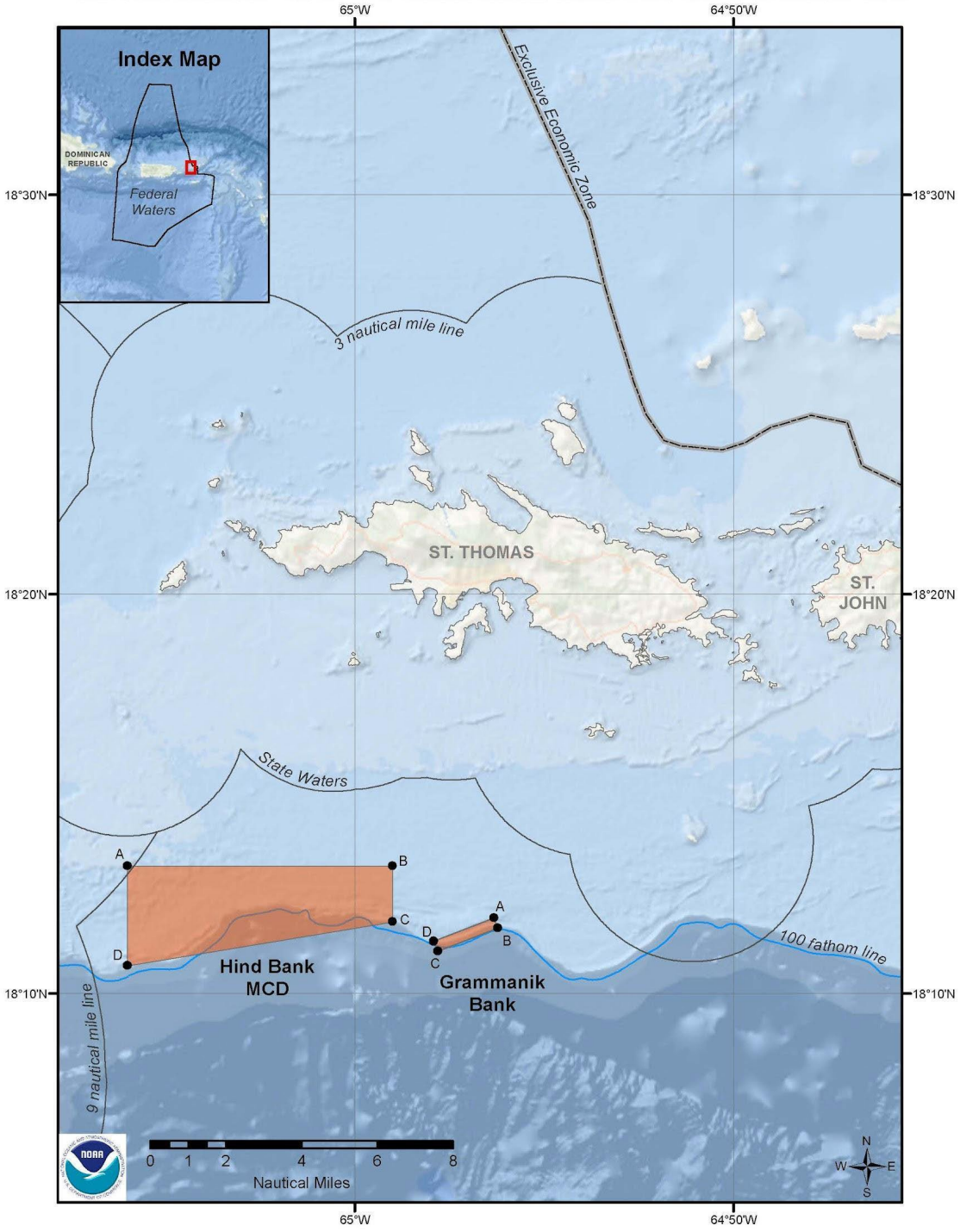


Reef Fish Closures - Mutton Snapper & Red Hind Spawning Aggregation Areas



Ocean Basemap from ArcGIS.com
Sources: Esri, GEBCO, NOAA, National Geographic, DeLorme, HERE, Geonames.org, and other contributors

Reef Fish Closures - Hind Bank Marine Conservation District & Grammanik Bank



Ocean Basemap from ArcGIS.com
Sources: Esri, GEBCO, NOAA, National Geographic, DeLorme, HERE, Geonames.org, and other contributors

Caribbean Region Conservation Areas. Size is for individual areas and does not account for any overlaps.

ID	Type	Focus	Area Names (# subareas)	Size (nm^2)	CFR	Prohibitions/Restrictions	ATB Principles Applied
C1	**Seasonal Fishery Mgmt/Other**	Spawning - Reef fish and invertebrates	Abrir la Sierra	9	50 § CFR 622.435	Seasonal no-take zone from December 21 to February 28* Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round.	1,2,3,5,7,8
C2	**Seasonal Fishery Mgmt/Other**	Spawning - Reef fish and invertebrates	Tourmaline Bank	9	50 § CFR 622.435	No-take zone from December 21 to February 28* Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round.	1,2,3,5,7,8
C3	**Seasonal Fishery Mgmt/Other**	Spawning - Reef fish and invertebrates	Bajo de Sico	9	50 § CFR 622.435	No-take zone from October 1 to March 31* Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round. Anchoring by fishing vessels is prohibited year-round.	1,2,3,5,7,8

C4	**Seasonal Fishery Mgmt/Other**	Spawning - Reef fish and invertebrates	Grammanik Bank	0.44	50 § CFR 622.435	No-take zone from February 1 to April 30* Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round.	1,2,3,5,7,8
C5	**Year-round Fishery Mgmt./Other**	Spawning - Reef fish and invertebrates	Hind Bank Marine Conservation District	16	50 § CFR 622.435	Year round no-take area* Fishing for any species and anchoring by fishing vessels are prohibited year-round.	1,2,3,5,7,8
C6	**Seasonal Fishery Mgmt/Other**	Spawning - Reef fish and invertebrates	Mutton Snapper Spawning Aggregation Area	2	50 § CFR 622.435	No-take zone of mutton snapper from April 1 to June 30* Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round.	1,2,3,5,7,8
C7	**Seasonal Fishery Mgmt/Other**	Spawning - Reef fish and invertebrates	Lang Bank Red Hind spawning aggregation	3	50 § CFR 622.435	Seasonal no-take area between December 1 to February 28* Fishing with pots, traps, bottom longlines, gillnets or trammel nets is prohibited year-round.	1,2,3,5,7,8

*Ecosystem Conservation Areas are year-round to conserve habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories.

Gulf of Mexico

The Gulf of Mexico Fishery Management Council (Gulf Council) manages fishery resources in the federal waters of the Gulf of Mexico (Gulf). The Gulf Council's jurisdiction extends from three to 200 miles off the coasts of Louisiana, Mississippi, and Alabama, and nine miles to 200 miles off Texas and the west coasts of Florida (Map GOM 1). The Gulf Council manages species within six fishery management plans (FMP)[4]. As part of the Gulf Council's FMPs, Essential Fish Habitat (EFH) is identified and described for each managed species in effort to conserve habitat and minimize the impacts of fishing. The FMPs include various conservation areas to protect sensitive habitat, protect species in known spawning areas such as closing areas during the spawning season of groupers, snappers and other species that may reproduce.

The Gulf Council has 24 place-based conservation areas (1,153 nm^2) in place that prohibit the use of fishing gears that could negatively affect the substrate, benthic habitat, or managed federal species (Map GOM 2). This includes 23 areas with year-round conservation measures and one (The Edges [390 nm^2]) that seasonally prohibits fishing with bottom tending gears to protect reef fish spawning aggregations. The Gulf exclusive economic zone (EEZ) also includes 12 other fishery management areas focused on gear or seasonal restrictions (Map GOM 3). These areas do affect allowable use of large areas of the Gulf EEZ (241,357 nm^2). In general, these areas are large and prohibit one or more gear types to reduce impacts of fishing, mitigate gear interactions between fisheries operating in the same geographic areas, or reduce interactions with protected species. In addition, the seasonal recreational shallow-water grouper closure encompasses most of the EEZ and is closed from February 1 through March 31 each year (Map GOM 4). While the geographic and temporal extent of these management regions are well-defined, these regions allow for extractive use (e.g., commercial and/or recreational fishing) and are often extensively used in a manner inconsistent with the definition of conservation areas in this report. This is not intended to minimize the conservation benefits of these areas, rather these areas highlight the potential for focused gear or seasonal restrictions as necessary, without prohibiting activities that are desirable, with minimal impact to conservation, and in support of critical socioeconomic activities in the region. A composite map of all managed areas is in Map GOM 5. The Gulf Council manages forty fish species (finfish, shrimp, spiny lobster) and more than 140 species in the Coral Fishery management plan. Based on the National Oceanic and Atmospheric Administration (NOAA) Fisheries overfishing and overfished stocks update, there are two stocks that are

[4] The National Oceanic and Atmospheric Administration (NOAA) implemented the Aquaculture Fishery Management plan for the Gulf in 2009. Its purpose was to maximize benefits to the nation by establishing a regional permitting process to manage the development of an environmentally sound and economically sustainable aquaculture industry in federal waters of the Gulf. However, a Court ruling determined that the Department of Commerce did not have the authority to permit aquaculture under federal fisheries management law.

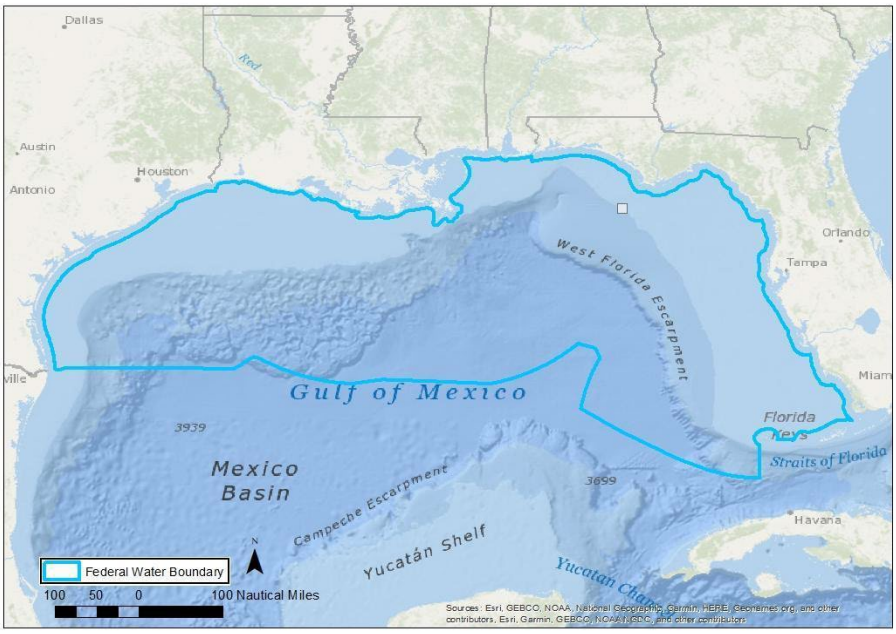
overfished and five stocks that are experiencing overfishing as of December 31, 2021[5]. For each of these stocks, the Gulf Council has developed or is developing rebuilding plans or regulatory measures necessary to end overfishing and/or rebuild the stock. This process is extensive and highlights the comprehensive approach to sustainably managing Gulf resources and is consistent with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act). For example, the Gulf Council has defined status determination criteria for each managed fish stock and is required to constrain fishing mortality within sustainable limits in the entire management area as determined by the Gulf Council's Scientific and Statistical Committee informed by the Best Scientific Information Available (BSIA)[6]. Moreover, the requirements of the Magnuson-Stevens Act also require the Council to identify and describe EFH for managed species by life-stage and to consider mechanisms to minimize the impacts of fishing. The information used to identify and describe EFH is reviewed every five years and the FMPs can be updated as necessary when new information on conservation goals are identified. The Gulf Council completed work on Amendment 9 to the Coral FMP in 2018 that identified several new Habitat Areas of Particular Concern (HAPC). HAPCs are spatial management tools and a subset of EFH in general that aim to provide additional conservation measures to areas that are considered rare or in need of additional management. The Gulf Council is currently developing an amendment to update the identification and description of EFH across the remaining FMPs. Finally, the Council prohibits retention of some species entirely in the Gulf EEZ as part of its overall conservation strategy. For example, red drum and goliath grouper are managed, highly desirable species that are prohibited from harvest[7], thus the entire Gulf EEZ functions as a conservation area for this species. However, the management for these species is not considered as part of the spatial management toolbox in the Gulf, yet it represents some of the most comprehensive management (in terms of conservation). As described, the Gulf Council relies on a variety of tools to support conservation and sustainable use of public natural resources in the Gulf. The Gulf Council continues engagement in this arena to address conservation issues as they arise while supporting ongoing sustainable use as prescribed by the Magnuson-Stevens Act.

[5] https://media.fisheries.noaa.gov/2022-01/q4-2021-stock-status-map.png

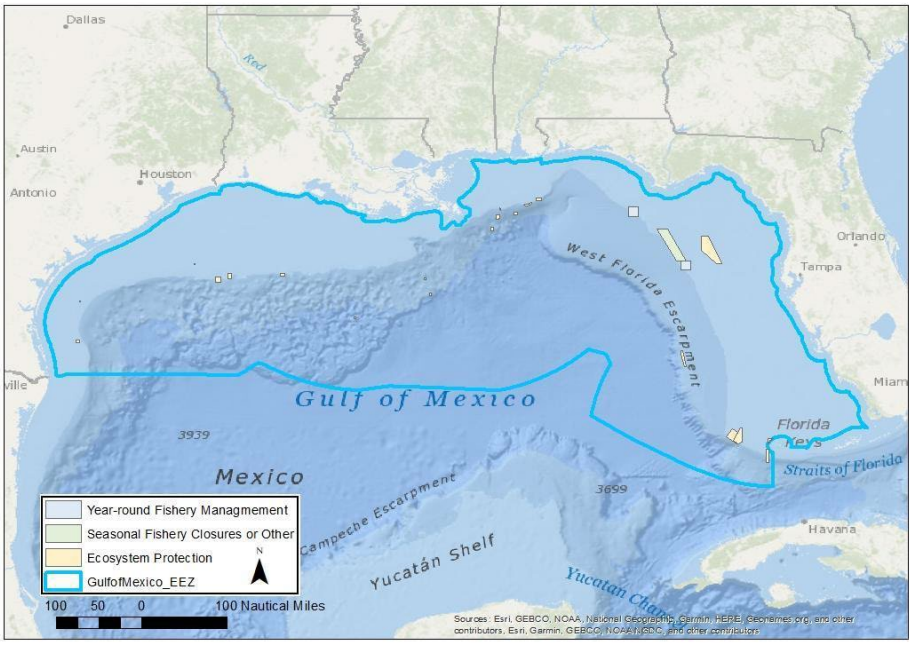
[6] This is a requirement of the Magnuson-Stevens Act and NOAA Fisheries makes a determination and certifies data as BSIA as applicable for management.

[7] Red drum are harvested within state waters of each Gulf state under highly regulated state managed fisheries.

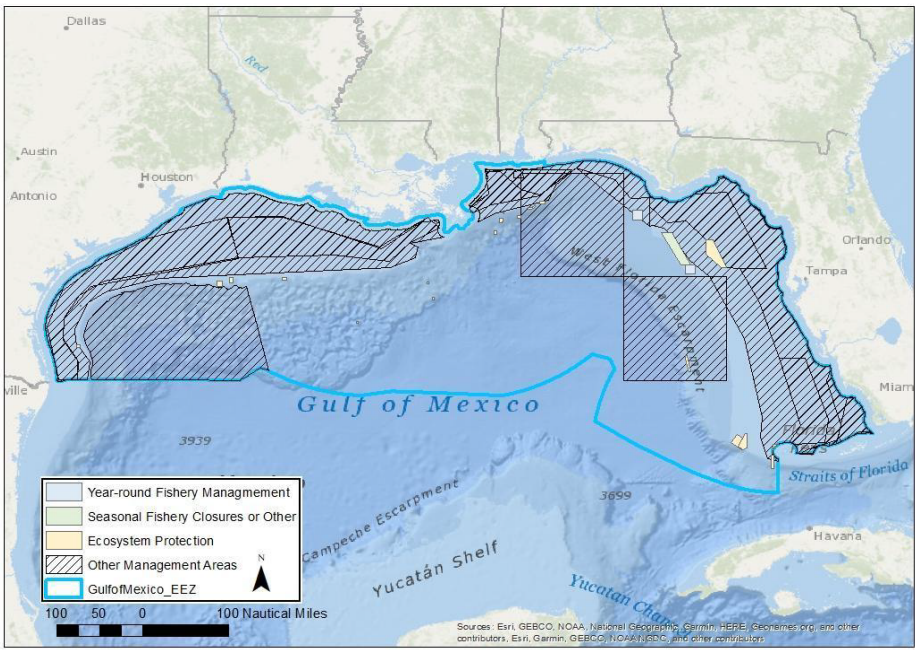
Maps of Conservation Areas in the Gulf of Mexico.



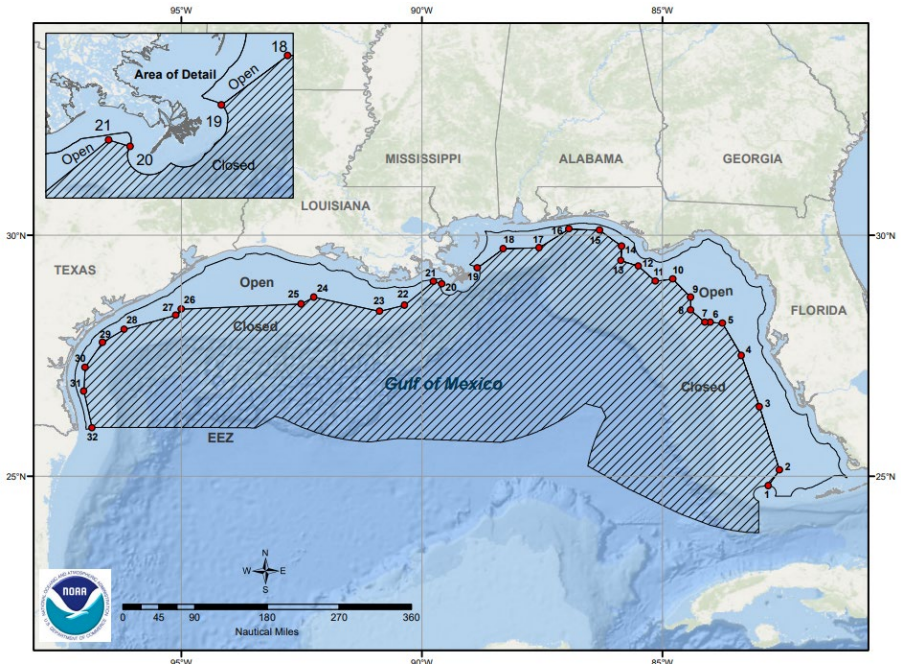
Map GOM 1: Map of the Gulf Council's 24 place-based conservation areas (1,153 nm^2). The Council's jurisdiction (federal waters) extends from three to 200 miles off the coasts of Louisiana, Mississippi, and Alabama, and nine to 200 miles off Texas and the west coast of Florida.



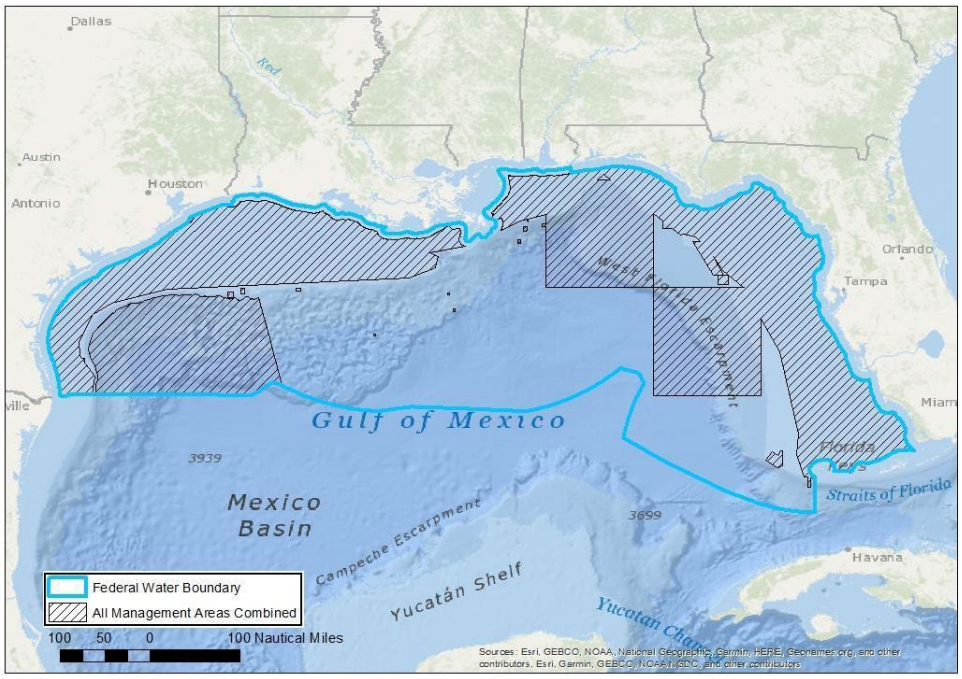
Map GOM 2: Map of the Gulf Council's 24 place-based conservation areas (1,153 nm^2).



Map GOM 3: Map of the place-based management measures in the Gulf. This includes the 24 areas identified as conservation areas as well as 12 other management areas with seasonal or gear prohibitions that did not meet the requirements for identification as a conservation area.



Map GOM 4. Recreational shallow water grouper (SWG) seasonal closure (Feb 1 – Mar 31). During the closure the bag and possession limits for SWG in or from the Gulf EEZ in the hashed portion of the map are zero.



Map GOM 5. Map of all spatial management areas in the Gulf combined[8]. This includes all areas that meet the definition of conservation area as well as those that do not meet the definition of conservation area as identified in this report. The area calculations remove areas of overlap for regions that are affected by more than one spatial management measure. The total composite area is 100,547 nm^2 representing 55.0% of the area of the Gulf EEZ.

[8] The Shallow-water-grouper seasonal closure is excluded from this map and resulting area calculations. See discussion of this area in the text and Figure GOM 4.

Gulf of Mexico Conservation Areas. Size is for individual areas and does not account for any overlaps.

ID	Type	Focus	Area Names (# subareas)	Size (nm^2)	CFR	Prohibitions/Restrictions	ATB Principles Applied
1	**Year-round Fishery Mgmt.**	Gag spawning closure	Madison-Swanson	87.019	50.622.34	All bottom tending gears	1,2,5,7,8
2	**Year-round Fishery Mgmt.**	Gag spawning closure	Steamboat Lumps	80.553	50.622.34	All bottom tending gears	1,2,5,7,9
3	**Seasonal Fishery Mgmt.**	Spawning - Reef fish protection	The Edges	294.505	50.622.34(a)	All bottom tending gears	1,2,5,7,10
4	**Ecosystem Conservation**	Habitat and coral protection	West Flower Garden Banks	27.010	50.622;50.640	All bottom tending gears	1,2,5,7,11
5	**Ecosystem Conservation**	Habitat and coral protection	East Flower Garden Banks	21.727	50.622;50.640	All bottom tending gears	1,2,5,7,12
6	**Ecosystem Conservation**	Vulnerable species - Coral protection	Florida Middle Grounds	256.001		Bottom trawl, dredge, other	1,2,5,7,13
7	**Ecosystem Conservation**	Reef fish/coral habitat protection	EEZ Portion of Tortugas North	11.038	50.622.34; 50.635.21;50.640.7;50.640.26	All bottom tending gears	1,2,5,7,8

8	**Ecosystem Conservation**	Reef fish/coral habitat protection	Tortugas South	41.220	50.622.34	All bottom tending gears	1,2,5,7,8
9	**Ecosystem Conservation**	Coral habitat protection	Pulley Ridge South	92.081	50.622.34	All bottom tending gears	1,2,5,7,8
10	**Ecosystem Conservation**	Coral habitat protection	Stetson Bank	1.329	50.622.34	All bottom tending gears	1,2,5,7,8
11	**Ecosystem Conservation**	Coral habitat protection	McGrail Bank	10.650	50.622.34	All bottom tending gears	1,2,5,7,8
12	**Ecosystem Conservation**	Coral habitat protection	West Florida Wall	36.290	50.622.2;50.625.1	All bottom tending gears	1,2,5,7,8
13	**Ecosystem Conservation**	Coral habitat protection	Alabama Alps Reef	2.698	50.622.2;50.625.2	All bottom tending gears	1,2,5,7,8
14	**Ecosystem Conservation**	Coral habitat protection	L&W Pinnacles and Scamp Reef	14.302	50.622.2;50.625.3	All bottom tending gears	1,2,5,7,8
15	**Ecosystem Conservation**	Coral habitat protection	Mississippi Canyon 118	11.047	50.622.2;50.625.4	All bottom tending gears	1,2,5,7,8
16	**Ecosystem Conservation**	Coral habitat protectionCoral	Roughtounge Reef	13.602	50.622.2;50.625.5	All bottom tending gears	1,2,5,7,8
17	**Ecosystem Conservation**	Coral habitat protection	Viosca Knoll 826	10.310	50.622.2;50.625.6	All bottom tending gears	1,2,5,7,8

18	**Ecosystem Conservation**	Coral habitat protection	AT 047	6.789	50.622.2;50.625.7	All bottom tending gears	1,2,5,7,8
19	**Ecosystem Conservation**	Coral habitat protection	AT 357	6.790	50.622.2;50.625.8	All bottom tending gears	1,2,5,7,8
20	**Ecosystem Conservation**	Coral habitat protection	Green Canyon 852	3.821	50.622.2;50.625.9	All bottom tending gears	1,2,5,7,8
21	**Ecosystem Conservation**	Coral habitat protection	Southern Bank	0.785	50.622.2;50.625.10	All bottom tending gears	1,2,5,7,8
22	**Ecosystem Conservation**	Coral habitat protection	Harte Bank	10.843	50.622.2;50.625.11	All bottom tending gears	1,2,5,7,8
23	**Ecosystem Conservation**	Coral habitat protection	Viosca Knoll 862/906	18.805	50.622.2;50.625.12	All bottom tending gears	1,2,5,7,8
24	**Ecosystem Conservation**	Coral habitat protection	Pulley Ridge South Portion A	93.610	50.622.2;50.625.13	All bottom tending gears	1,2,5,7,8

*Ecosystem Conservation Areas are year-round to conserve habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories.

Pacific

The Pacific Fishery Management Council manages fisheries for the 237,677 square nautical mile U.S. West Coast EEZ, working collaboratively with the four West Coast states of Washington, Oregon, California, and Idaho, with Tribes, Federal agencies, and stakeholders. Four regulatory FMPs (groundfish, highly migratory species, coastal pelagic species, and salmon) encompass over 120 stocks under Federal management. The Pacific Council's non-regulatory Fishery Ecosystem Plan provides ecosystem information for incorporation into Council decision making. The Pacific Council embraces a holistic and precautionary approach to sustainable fisheries management, adopting numerous spatial closures, gear restrictions, seasonal and perennial harvest limits, and other actions to conserve important habitats, fish species, and the broader marine ecosystem.

Under the MSA's EFH authorities the Pacific Council established over 70 areas closed to bottom trawl and/or all bottom contact gear, to protect vital biogenic and physical habitats, some of which are also designated HAPCs. In addition, the Council established the Deep Sea Conservation Area (DECA) which is closed to all bottom contact gear, using MSA discretionary authorities in waters deeper than 3500 meters. Together these areas represent 208,923 square nautical miles of seafloor protected from bottom trawling and/or all bottom contact fishing. These benthic habitats are critical components of the marine ecosystem, providing spawning, rearing, and feeding grounds for all life stages of many demersal species including rockfish, black cod, and flatfish species. Visual surveys show biogenic habitat features, octopus gardens, rocky reefs, canyons, and deep sea coral and sponge habitats that are protected from fishing gear impacts.

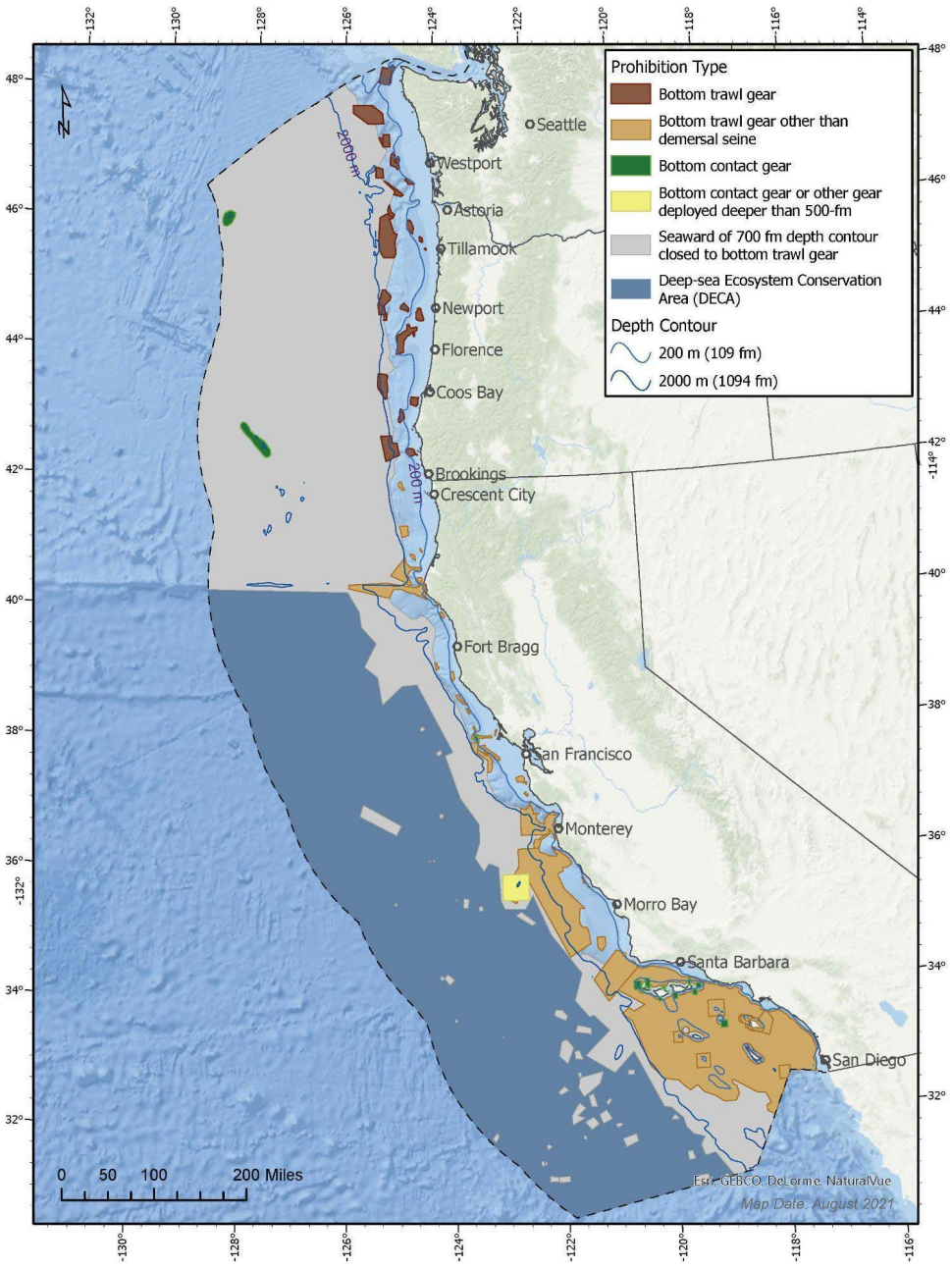
The Pacific Council has also implemented numerous conservation measures addressing species conservation and bycatch, including a coastwide rockfish conservation area (RCA) prohibiting non-trawl groundfish gear, an RCA off the Washington Coast prohibiting bottom trawl gear, two Cowcod Conservation Areas in the Southern California Bight, and numerous other discrete areas with various prohibitions designed for species conservation. Many of these areas overlap with habitat protection areas, thus offering redundant habitat and species protections.

Additional fishery management measures include time and area closures for the Pacific whiting (hake) fishery, groundfish closures around the Farallon Islands and Cordell Bank, and bottom trawl footrope restrictions in nearshore waters (generally 150 fm or less).

Finally, all four Pacific Council FMPs contain ecosystem component (EC) species specific to each FMP, as well as a group of EC species shared between all of the FMPs. Directed harvest is prohibited on these EC species, which are shared between all of the Pacific Fishery Management Council's FMPs, and known collectively as "Shared EC Species." These shared EC species include round herring and thread herring; mesopelagic fishes of the families Myctophidae, Bathylagidae, Paralepididae, and Gonostomatidae; Pacific sand lance, Pacific saury, silversides, smelts of the family Osmeridae, and pelagic squids. And in 2012 the Pacific Council adopted a coastwide

prohibition on harvest of krill species. These harvest prohibitions are not captured in spatially-based metrics and thus are not included in the tables in this document. However, they provide meaningful ecosystem protections that benefit both fisheries and the Pacific Coast ecosystem.

Map of Habitat and Ecosystem Conservation Areas in the Pacific.



Pacific Council Conservation Areas. Size is for individual areas and there may be some overlaps.

ID	Type	Focus	Area Names (# subareas)	Size (nm^2)	CFR	Prohibitions/Restrictions	ATB Principles Applied
P1	**Ecosystem Conservation**	Habitat	Bottom Trawl Essential Fish Habitat Conservation Areas	114,676	660.75 – 660.79	All bottom trawl fishing prohibited	1, 2, 3, 4, 5, 7, 8
P2	**Ecosystem Conservation**	Habitat	Bottom Contact Gear Essential Fish Habitat Conservation Areas	998	660.75 – 660.79	All bottom contact fishing prohibited	1, 2, 3, 4, 5, 7, 8
P3	**Ecosystem Conservation**	Habitat	Deep Sea Conservation Area	93,249	660.11	All bottom contact fishing prohibited in EEZ waters deeper than 3500m	1, 2, 3, 4, 5, 7, 8
P4	**Year-round Fishery Mgmt.**	Vulnerable Species	Bottom Trawl Rockfish Conservation Area (only off WA Coast)	404	660.130(e)(4)	Federal bottom trawl fishing prohibited	1, 2, 3, 4, 5, 7, 8
P5	**Seasonal Mgmt.**	Vulnerable Species	Bottom Trawl Rockfish Conservation Areas	2,748	660.130(e)(4)	Federal bottom trawl fishing prohibited	1, 2, 3, 4, 5, 7, 8
P6	**Year-round Fishery Mgmt.**	Vulnerable Species	Non-Trawl Rockfish Conservation Areas	12,756	660.230(d)(11) And 660.330(d)(12)	Federal non-trawl fishing prohibited	1, 2, 3, 4, 5, 7, 8

P7	**Year-round Fishery Mgmt.**	Vulnerable Species	Yelloweye Rockfish Conservation Areas, defined at 660.70(d)	378	660.70	Seasonal	1, 2, 3, 4, 5, 7, 8
P8	**Year-round Fishery Mgmt.**	Vulnerable Species	Salmon troll Yelloweye Rockfish Conservation Area, defined at 660.70(d))	TBD	660.330(d)(10)	Fishing with salmon troll gear is prohibited within the Salmon Troll YRCA. Permanent	1, 2, 3, 4, 5, 7, 8
P9	**Year-round Fishery Mgmt.**	Vulnerable Species	Cowcod Conservation Areas, defined at 660.70(d)	4,001	660.330(a)(11)	Groundfish fishing prohibited within CCAs (CCA West and CCA East). Permanent, could change soon	1, 2, 3, 4, 5, 7, 8
P10	**Year-round Fishery Mgmt.**	Vulnerable Species	Large footrope bottom trawl prohibition	TBD	660.130(c)(1)(i)	Large footrope gear prohibited shoreward of the trawl RCA North of 46°16′ N lat., and shoreward of 150fm South 40°10′ N lat Permanent	1, 2, 3, 4, 5, 7, 8
P11	**Year-round Fishery Mgmt.**	Vulnerable Species	Midwater trawl restriction north of 40°10′ N lat.	TBD	660.130(c)(3)(i)	Limited entry midwater trawl gear is allowed for vessels declared into the non-whiting Shorebased IFQ Program during the Pacific whiting primary season. Permanent.	1, 2, 3, 4, 5, 7, 8
P12	**Year-round Fishery Mgmt.**	Vulnerable Species	Salmon Conservation Zones	TBD	660.130(e)(8)	Fishing with midwater trawl gear and bottom trawl gear, other than selective flatfish trawl gear, is prohibited in the Klamath River Salmon Conservation Zone and the Columbia River Salmon Conservation Zone. Permanent	1, 2, 3, 4, 5, 7, 8

*Ecosystem Conservation Areas are year-round to conserve habitat, biodiversity or special ecosystems, or vulnerable species. Year-round Fishery Management areas are designed to address spatially driven fishery management challenges. Seasonal Fishery Management/Other include areas that seasonally address spatially driven fishery management challenges, or other area-based conservation measures that may not fit in the other 2 categories.

North Pacific

The North Pacific Council's management authority extends from three to 200 miles off the coast of Alaska. The North Pacific Council manages 140+ species within 47 stocks and stock complexes, including pollock, cod, rockfish, crab, scallops, halibut, and state- managed salmon fisheries through six fishery management plans (FMPs).

The North Pacific Council has a successful record of science-based, sustainable fisheries management since the MSA was implemented in 1976. Each year for the past 45 years, the sustainable harvest of groundfish in the North Pacific totals 2,200,000 metric tons or greater, which accounts for nearly 60% of the total U.S. catch. These yields are a direct result of Council management for sustainable fisheries that provide benefits for harvesters, processors, recreational and subsistence users, and fishing communities, which (1) are maintained by healthy, productive, biodiverse, resilient marine ecosystems that support a range of services; (2) support robust populations of marine species at all trophic levels, including marine mammals and seabirds; and (3) are managed using a precautionary, transparent, and inclusive process that allows for analyses of tradeoffs, accounts for changing conditions, and mitigates threats. In the North Pacific, sustainable fisheries and protection of ecosystem function and integrity are not just compatible; they are intertwined.

One of the many tools used by the North Pacific Council to achieve this success has been the establishment of area-based conservation measures. There are about 200 conservation areas that have been established to conserve marine resources and biodiversity, protect vulnerable habitats and ecosystems, and support healthy coastal communities. These areas encompass 666,497 nm^2 that are closed to bottom trawling year-round, representing about 65% of the Exclusive Economic Zone (EEZ) in the North Pacific (1,025,770 nm^2). A total of 153,832 nm^2 are closed year-round to all bottom tending gears (15.0% of EEZ). Additional areas are closed to directed fishing for important prey species (Atka mackerel, cod, and pollock) for Steller sea lions to minimize potential competition with the fishing fleet for prey.

Although conservation areas can be useful to protect essential fish habitat, unique and biodiverse ecosystems (e.g., seamounts), and vulnerable species, other management tools are even more important for conserving biodiversity and maintaining sustainable fisheries. Limits on the harvest of fish species in 100% of the EEZ provides for the conservation of marine biodiversity far beyond what can be achieved through the conservation of just a portion of the ocean. Other non-spatial conservation measures used include limits on the amount of bycatch, prohibitions on targeting forage species as well as deep-sea corals and sponges, gear modifications to reduce bycatch or habitat impacts, allocation of fish to less impactful gear types, and special measures to reduce impacts on marine mammals and seabirds, all of which contribute to the maintenance of biological productivity and biodiversity, ecosystem function and services (including seafood production) in the US EEZ.

While marine conservation areas can provide long-term conservation benefits (particularly for stationary components of the ecosystem such as deep-sea corals), some areas in the North Pacific have been modified to address changing environmental conditions that caused more mobile fish stocks to alter their historic distribution in response. For example, in 1995, the Council established Chinook and Chum Salmon Savings Areas in the Bering Sea where salmon were aggregated and taken as bycatch. By 2005, the Salmon Savings areas were re-evaluated and determined to be counterproductive as a conservation measure, so fixed areas were eliminated and replaced with a more responsive and flexible system that opens and closes spatial areas throughout the season 5-7 days at a time based on relative salmon bycatch rates. Other species are also shifting distributions in response to changing environmental conditions. For example, Pacific cod are now abundant in the northern Bering Sea where the stock was not previously present due to the disappearance of the cold pool, which served as a barrier to northward fish movement. Because environmental changes create shifting ecosystem functions and potentially enormous management challenges, the problem of fixed closures in a changing climate cannot be overlooked or understated.

Quick NPFMC References

Cleaver, S., and D. Evans. 2019 Gulf of Alaska Groundfish Fishery Management Plan Amendment Action Summaries GOA FMP Amendment Action Summaries NPFMC, 107p.

Heltzel, J. M., D. Witherell, and W.J. Wilson. 2011. Ecosystem-based Management for Protected Species in the North Pacific Fisheries. *Marine Fisheries Review 73(3)20-35*

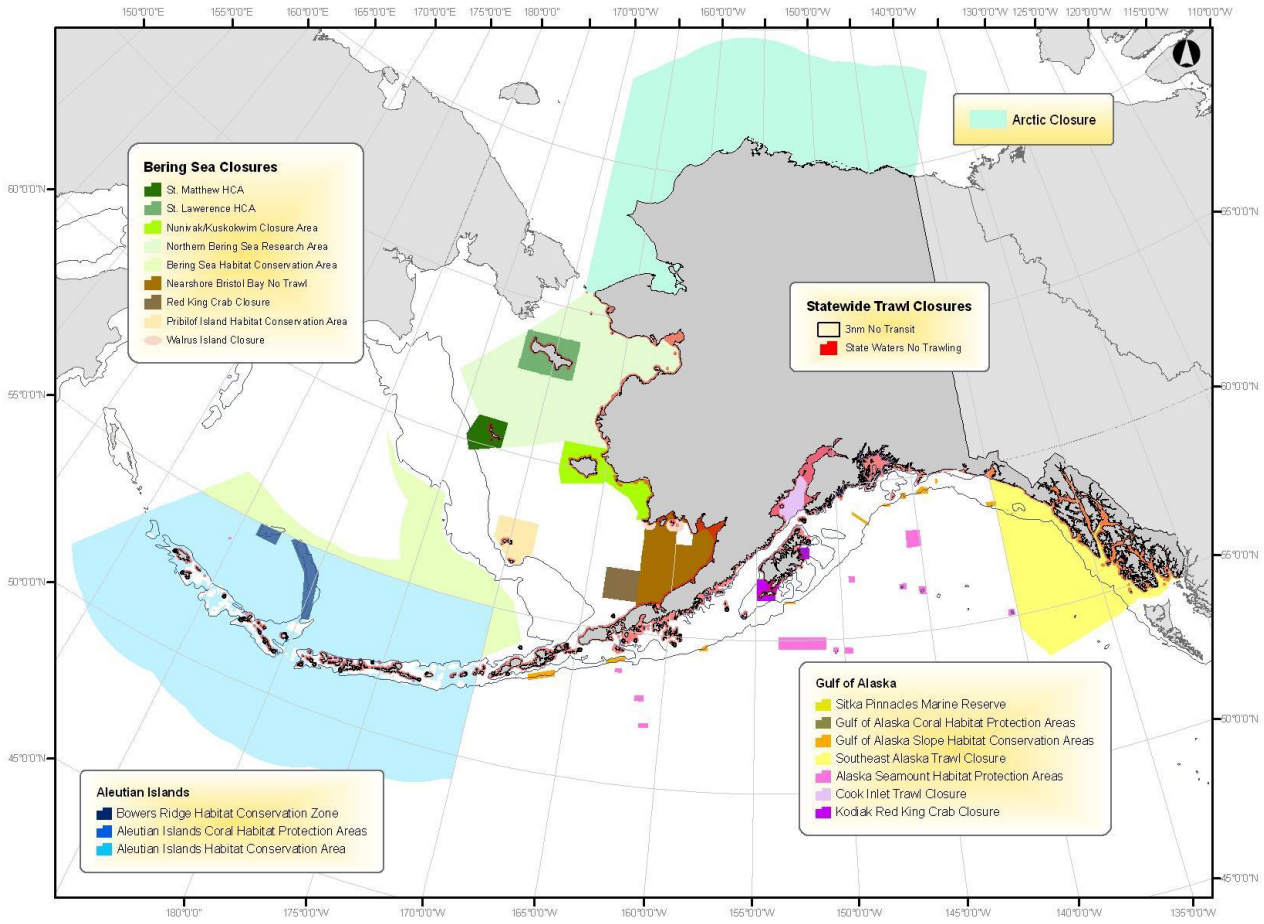
Robinson, M., and D. Witherell. 2016 Bering Sea and Aleutian Islands Groundfish Fishery Management Plan Amendment Action Summaries. BSAI FMP Amendment Action Summaries NPFMC, 123p.

Witherell, D., and J. Armstrong. 2015. Groundfish Species Profiles NPFMC 57p.

Witherell, D., C. Pautzke and D. Fluharty. 2000. An ecosystem-based approach for Alaska groundfish fisheries. ICES Journal of Marine Science 57:771-777.

Witherell, D. and D. Woodby. 2005. Application of Marine protected Areas for Sustainable Production and Marine Biodiversity off Alaska, Marine Fisheries Review, Vol 67(1); 1-27

Map of Conservation Areas in the North Pacific. Due to overlap, and other reasons, many areas are not shown in this map, including the Steller sea lion conservation areas, the Bering Sea herring conservation area, the salmon gillnet fishery prohibition area, the Rockfish Conservation areas, and areas closed to scallop dredging.



North Pacific Region Conservation Areas. Includes State of Alaska closures for scallop, rockfish, and herring. Federally regulated areas that were fully evaluated but did not meet the criteria of a conservation area included: the Halibut Fishery Closed Area, the Chum Salmon Savings Area, the Catcher Vessel Operational Area. Areas that are closed when bycatch amounts are met (i.e., trigger closures), and areas that prohibit fishing for a particular species throughout a management area (e.g., Bering Sea and GOA Atka mackerel fishing prohibitions) were not considered.

ID	Type	Focus	Area Names (# subareas)	Size (nm^2)	CFR	Prohibitions/ Restrictions	ATB Principles Applied
NP1	**Ecosystem Conservation**	Habitat	Aleutian Islands Habitat Conservation Area	278,673	50 CFR 679.22(a)(14) and Table 24 to Part 679; 5 AAC 39.167(3)	Bottom trawls	1,2,5,7,8
NP2	**Ecosystem Conservation**	Habitat	Bering Sea Habitat Conservation Area	46,058	50 CFR 679.22(a)(16) and Table 42 and Figure 16 to 50 CFR Part 679	Bottom trawls	1,2,5,7,8
NP3	**Ecosystem Conservation**	Habitat	Bowers Ridge Habitat Conservation Zones (2)	5,284	50 CFR 679.22(a)(15) and Table 25 to Part 679; 5 AAC 39.167(3)	Bottom trawls, dredges	1,2,5,7,8
NP4	**Ecosystem Conservation**	Habitat	Gulf of Alaska Coral Habitat Protection Areas (5)	14	50 CFR §§ 679.22(b)(9) and 679.7(a)(20), Table 26 to 50 CFR Part 679; 5 AAC 39.167(4)	Bottom trawls, dredges, dinglebar, pot, and longline gear.	1,2,5,7,8

NP5	**Ecosystem Conservation**	Habitat	Gulf of Alaska Slope Habitat Conservation Areas (9)	2,109	50 CFR 679.22(b)(10) and Table 27 to 50 CFR Part 679	Bottom trawls	1,2,5,7,8
NP6	**Ecosystem Conservation**	Habitat	Northern Bering Sea Research Area	61,602	50 CFR 679.22(a)(17) and Figure 17 and Table 43 to Part 679; 5 AAC 39.164(b)(9)	Bottom trawls	1,2,5,7,8
NP7	**Ecosystem Conservation**	Habitat	Nunivak Island, Etolin Strait, and Kuskokwim Bay Habitat Conservation Area	9,757	50 CFR 679.22(a)(18) and Table 44 and Figure 21 to 50 CFR Part 679; 5 AAC 39.164(b)(10)	Bottom trawls	1,2,3,4,5,7,8
NP8	**Ecosystem Conservation**	Habitat	St. Lawrence Island Habitat Conservation Area	8,457	50 CFR 679.22(a)(19) and Table 45 and Figure 17 to 50 CFR Part 679; 5 AAC 39.164	Bottom trawls	1,2,5,7,8
NP9	**Ecosystem Conservation**	Habitat	St. Matthew Island Habitat Conservation Area	4,478	50 CFR 679.22(a)(20) and Table 46 to Part 679	Bottom trawls	1,2,7,8

NP10	**Ecosystem Conservation**	Habitat	Southeast Alaska Trawl Closure	52,680	50 CFR §§ 679.7(b)(1), 679.22(b)(4) and Figure 3 to 50 CFR Part 679	All trawls	1,2,3,5,7,8
NP11	**Ecosystem Conservation**	Habitat and Vulnerable species	Kodiak Island, Trawls Other Than Pelagic Trawls - Type I Closures (2)	1,964	50 CFR 679.22(b)(1)(i) and Figure 5 to Part 679; 5 AAC 39.164(b)(1)	Bottom trawls	1,2,3,5,7,8
NP12	**Ecosystem Conservation**	Habitat and Vulnerable species	Nearshore Bristol Bay Trawl Closure	19,067	50 CFR §§ 679.2, 679.22(a)(9), and Figure 12 to Part 679	Bottom trawls and dredges. A small area (948 nm^2) is open to trawling from March 31-June 15.	1,2,5,7,8
NP13	**Ecosystem Conservation**	Habitat and Vulnerable species	Pribilof Islands Habitat Conservation Zone	5,713	50 CFR 679.22(a)(6) and Figure 10 to 50 CFR Part 679; 5 AAC 38.425(15)	All trawls, dredges	1,2,3,5,7,8
NP14	**Ecosystem Conservation**	Habitat and Vulnerable species	Red King Crab Savings Area	3,998	50 CFR 679.22(a)(3), 679.21(e)(3)(ii)(B), and Figure 11 to Part 679	Bottom trawls. In years when a RKC GHL is established, fishing with bottom trawls is allowed in southern part with $\leq$25% of RKC PSC limit.	1,2,3,5,7,8
NP15	**Ecosystem Conservation**	Biodiversity	Alaska Seamount Habitat Protection Areas (14)	5,312	50 CFR §§ 679.22(a)(12) and (b)(8), 679.7(a)(20), and	Bottom trawls, dredges, dinglebar, pot, and longline gear.	1,2,7,8

					Table 22 to Part 679; 5 AAC 39.167(5)		
NP16	**Ecosystem Conservation**	Biodiversity vulnerable ecosystems	Aleutian Islands Coral Habitat Protection Areas (6)	111	50 CFR §§ 679.22(a)(13) and 679.7(a)(20), Table 23 to Part 679; 5 AAC 39.167(1)	Bottom trawls, dredges, dinglebar, pot, and longline gear.	1,2,7,8
NP17	**Ecosystem Conservation**	Biodiversity	Sitka Pinnacles Marine Reserve	2	50 CFR §§ 679.22(b)(5)	No fishing or anchoring	1,2,3,7,8
NP18	**Ecosystem Conservation**	Vulnerable Species	Steller Sea Lion Protection Areas, AI Subarea (49)	18,806	50 CFR 679.22(a)(8)(v) and Table 4, 12, 5, and 6 to Part 679	No fishing for pollock, Pacific cod, or Atka mackerel	1,2,7,8
NP19	**Ecosystem Conservation**	Vulnerable Species	Steller Sea Lion Protection Areas - Seguam Foraging Area	2,132	50 CFR 679.22(a)(8)(i)	No fishing for pollock, Pacific cod, or Atka mackerel	1,2,7,8
NP20	**Ecosystem Conservation**	Vulnerable Species	Steller Sea Lion Protection Areas - Bogoslof Area	10,776	50 CFR 679.22(a)(7)(i) and Table 5	No fishing for pollock, Pacific cod, or Atka mackerel	1,2,7,8

NP21	**Ecosystem Conservation**	Vulnerable Species	Steller Sea Lion Protection Areas, Bering Sea Subarea (17)	6,979	50 CFR 679.22(a)(8)(v) and Table 4, 12, 5, and 6 to Part 679	No fishing for pollock or Pacific cod	1,2,7,8
NP22	**Ecosystem Conservation**	Vulnerable Species	Steller Sea Lion Protection Areas - Bering Sea Pollock Restriction Area	1,572	50 CFR 679.22(a)(7)(ii) and 679.23(e)(2)(i)	No fishing for pollock from January 20 - June 10.	1,2,4,7,8
NP23	**Ecosystem Conservation**	Vulnerable Species	Steller Sea Lion Protection Areas - Gulf of Alaska (68)	24,475	50 CFR 679.22(a)(8)(v) and Table 4, 12, 5, and 6 to Part 679	No fishing for pollock or Pacific cod.	1,2,4,7,8
NP24	**Ecosystem Conservation**	Vulnerable Species	Walrus Protection Areas – Cape Peirce, Round, and the Twins (3)	800	50 CFR 679.22(a)(4)	All federally permitted fishing vessels from April 1- Sept 30, except transit allowed in designated corridors from April 1-August 15	1,2,3,4,7,8
NP25	**Ecosystem Conservation**	Vulnerable species and habitat	Cook Inlet Non-Pelagic Trawl Closure	5,717	50 CFR 679.22(b)(7)	Bottom trawls	1,2,5,7,8
NP26	**Ecosystem Conservation**	Habitat/ Vulnerable Species	Marmot Bay Tanner Crab Protection Area	112	50 CFR 679.22(b)(3) and Figure 5	All trawls	1,2,3,5,7,8

NP27	**Ecosystem Conservation**	Biodiversity	Arctic Closure	148,393	50 CFR 679.20(a)(2)	All fishing	1,2,3,4,7,8
N28	**Ecosystem Conservation**	Vulnerable Species/ Habitat	Area 512 Closure	7,944	50 CFR 679.22(a)(1)	All trawls	1,2,5,7,8
NP29	**Seasonal Fishery Mgmt./Other**	Vulnerable Species	Area 516 Closure	5,031	50 CFR 679.22(a)(2)	All trawls from March 15-June 15.	1,2,5,7,8
NP30	**Year-round Fishery Mgmt./Other**	Enforcement and vulnerable species	Salmon Management Area West	984,294	50 CFR § 679.7(h)(2) and Figure 23 to Part 679	Fishing for salmon	1,2,7,8
NP31	**Year-round Fishery Mgmt./Other**	Habitat	Modified Gear Trawl Zone	3,167	50 CFR §§ 679.22(a)(21)	Bottom trawls without modified sweeps	1,2,7,8
NP32	**Seasonal Fishery Mgmt./Othe**	Vulnerable Species	Kodiak Island, Trawls Other Than Pelagic Trawls - Type II Closures (2)	1,089	50 CFR 679.22(b)(1)(ii) and Figure 5 to Part 679; 5 AAC 39.164(b)(1)	Bottom trawls from Feb 15 - June 15	1,2,3,7,8

NP33	**Seasonal Fishery Mgmt./Other**	Vulnerable Species	Steller Sea Lion Conservation Area	23,866	50 CFR 679.22(a)(7)(vii)	Pollock fishing until April 1 for catcher vessels >99'. When 28% of pollock TAC is taken the area closes for all until April 1.	1,2,7,8
NP34	**Year-round Fishery Mgmt./Other**	Habitat	Scallop Closed Areas - Aleutian Islands (2)	24,110	5 AAC 38.076, 38.425(1) - (14) and (16)	Scallop dredges	1,2,7,8
NP35	**Year-round Fishery Mgmt./Other**	Habitat	Scallop Closed Areas - Gulf of Alaska (8)	66,440	5 AAC 38.076, 38.425(1) - (14) and (16)	Scallop dredges	1,2,7,8
NP36	**Year-round Fishery Mgmt./Other**	Other - Rebuilding	Bering/Kotzebue Herring Closed Area	170,407	5 AAC 27.950 (d), 27.905, 27.900	Fishing for herring	1,2,7,8
NP37	**Year-round Fishery Mgmt./Other**	Other - Rebuilding	Black Rockfish Closure Areas (4)	10,938	5 AAC 28.150(e); AS 16.05.251	Fishing for black rockfish	1,2,7,8

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Western Pacific

The Western Pacific Regional Fishery Management Council has a non-continuous marine jurisdiction spanning 1,692,082 nm^2 throughout the Western and Central Pacific and includes waters seaward of one state (Hawaii), two territories (American Samoa and Guam), one commonwealth (Commonwealth of the Northern Mariana Islands, CNMI), and several Pacific Remote Island Areas. The Western Pacific Council was the first regional fishery management council to develop a fishery management plan (FMP) for coral reef ecosystems in 2001 and place-based fishery ecosystem plans (FEPs) in 2009. The Western Pacific has five FEPS: American Samoa Archipelago FEP, Hawaii Archipelago FEP, Mariana Archipelago FEP, Pacific Remote Island FEP, and the Pacific Pelagic FEP. Under each of the FEPs, the use of bottom trawling, bottom-set gillnets, poison/explosives, and other potentially destructive bottom-tending gears are prohibited in 100% of Western Pacific waters. The FEPs also provide adaptive approaches to address climate change and uncertainty due to ecosystem dynamics impacting target or bycatch species. Principle active fisheries managed under the FEPs include pelagic longline fisheries in Hawaii and American Samoa, bottomfish hook and line fisheries, non-longline pelagic fisheries (troll and handline), and other fisheries targeting Kona crab, deep-water shrimp, and precious corals. The Western Pacific Region includes 16 management areas, of which 15 provide year-round protections. Four of the largest Marine National Monuments exist in Western Pacific Region waters.

The Western Pacific is home to the largest US tuna fleet, the two-sector limited-entry Hawaii longline fishery. The Hawaii longline fishery comprises a deep-set tuna sector (including a few vessels based on the US West Coast) and the Hawaii shallow-set swordfish sector. The Hawaii longline fishery harvests 30 to 36 million pounds of tuna, swordfish, and other pelagic fish per year[9]. The deep-set sector produces 60-70% of US-harvested non-cannery yellowfin and bigeye tuna. The shallow-set sector produces 50-60% of US-harvested swordfish. An American Samoa limited-entry longline fishery targets South Pacific albacore, catching 1.2 to 3 million pounds in recent years[9]. In shallow-set longline fishing, the gear is configured so that the hooks remain above 100 meters (m) in depth to target swordfish near the surface and operates entirely at night to avoid interactions with seabirds and other non-target species. In deep-set and albacore longline fishing, the gear is configured so that all of the hooks fall within 100 m to 300 m to target deeper-dwelling tunas. The Western Pacific Region lacks a continental shelf; therefore longline fisheries operate in deep waters in excess of 1,500 m and do not interact with bottom habitats. The Western Pacific Council has taken a lead in promoting domestic and international measures to reduce the impacts of its longline fisheries on non-target and protected species. This effort includes the prohibition of wire leaders, provisions to reduce trailing gear on released animals,

[9] WPRFMC, 2021. Annual Stock Assessment and Fishery Evaluation Report Pacific Island Pelagic Fishery Ecosystem Plan 2020. Remington, T., Fitchett, M., Ishizaki, A., DeMello, J.

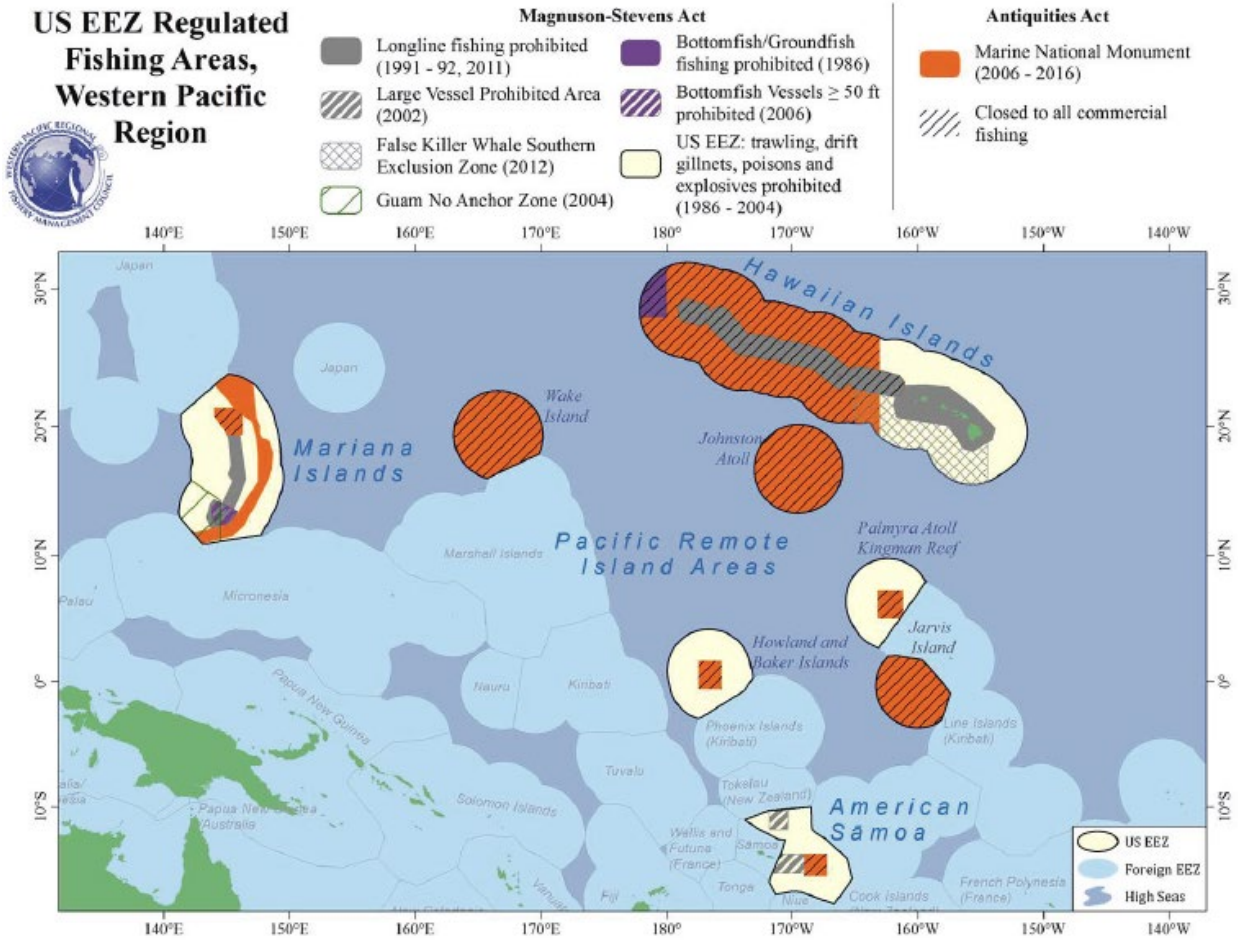
and safe-handling requirements in longline fisheries to reduce mortality on sharks, sea turtles, and other species.

The Western Pacific Council has a history of using area-based management tools under the auspices of the MSA. Since 1991, longline fishing within 50 nm of the Northwest Hawaiian Islands, 50 to 75 nm from the shoreline in the Main Hawaii Islands, and within 50 nm of Guam have been prohibited to minimize the potential for gear conflicts with small boat fisheries and interactions with protected species. Since 2011, longline fishing within 30 nm of the CNMI has been prohibited. The Western Pacific Council modified a large vessel prohibited area for longline vessels, prohibiting longline vessels over 50 ft from operating 12 to 17 nm (initially 50 nm) of Swains Island, Tutuila, and the Manua Islands. The Western Pacific bottomfish FMP also limited access of 'large' vessels fishing for bottomfish within 50 nm of Guam (vessels > 50 ft) and prohibited commercial fishing of vessels greater than 40 ft within 10 nm from specific islands around CNMI. The Western Pacific Council and NMFS created an extended moratorium on seamount groundfishing along the Hancock Seamount, an area later encompassed within the Papahānaumokuākea Marine National Monument (PMNM). The Western Pacific coral reef ecosystems FMP first established a network of MPAs in the Pacific Remote Island Areas (PRIA). Howland, Baker, Jarvis Islands, Rose Atoll, and Kingman Reef were designated as no-take MPAs. Palmyra, Johnston Atolls, and Wake Islands were designated as low-use MPAs where fishing was allowed under special fishing permits. These MPAs were later incorporated in the Pacific Remote Islands Marine National Monument (PRIMNM) several years later.

Federal regulations temporarily prohibit longline fishing in the Southern Exclusion Zone (SEZ), an area of the EEZ south of Hawaii. An SEZ closure is triggered under regulations implementing the False Killer Whale Take Reduction Plan if there are two or more observed serious injuries or mortalities of false killer whales in the EEZ around Hawaii in a given year. This trigger has closed the SEZ from longline fishing with regularity.

The PMNM, PRIMNM, the Marianas Trench Marine National Monument (MTMNM), Rose Atoll Marine National Monument (RAMNM), and expansions make up 54% of US waters in the Western Pacific. Combining the PMNM and its expansion, the Hawaii longline exclusion zones, and an SEZ closure precludes the Hawaii-based longline fishery from operating in 81% of the US EEZ around Hawaii. As a result, the Hawaii longline fleet harvests approximately 80% of its catch on the high seas. Western Pacific pelagic fisheries will be disproportionately affected by outcomes of the UN Intergovernmental Conference on Marine Biodiversity of Areas Beyond National Jurisdiction (BBNJ). BBNJ negotiations may render further utilization of area-based management tools on the high seas, potentially posing more spatial limitations for US fisheries in the region that are mostly reliant on high seas fishing access.

Map of Conservation Areas in the Western Pacific.



Western Pacific Conservation Areas. Size is for individual areas and does not account for any overlaps. Areas in gray are included within Marine National Monuments

ID	Type	Focus	Area Names (# subareas)	Size (nm^2)	CFR	Prohibitions/Restrictions	ATB Principles Applied
WP-1-4	**Ecosystem Conservation**	Habitat, Vulnerable Species, and Biodiversity	Western Pacific Region Total Prohibition on 'Destructive' Gears	1,692,082	50 C.F.R. Part 600.725(v)	Drift gillnets, dredges, trawls, poisons, traps	1,2,3,4,5,6,7,8
WP-1	**National Marine Monument**	Habitat	Papahanaumokuakea Marine National Monument (PMNM), original	105,569	Proclamation 8031 and Proclamation 8112	All fishing gears, indigeneous exemptions	1,2,3,4,5,6,7,8
WP-1	**National Marine Monument**	Habitat	PMNM Expansion	334,035	Expansion: Proclamation 9478	All fishing gears, indigeneous exemptions	1,2,3,4,5,6,7,8
WP-2	**National Marine Monument**	Habitat	Pacific Remote Island Area (PRIA) MNM Expanded (including original area)	367,491	Proclamation 9173	All fishing gears, indigeneous exemptions	1,2,3,4,5,6,7,8
WP-2	**National Marine Monument**	Habitat	PRIA MNM - Johnston, Jarvis, Palmyra and Kingman (Original)	62,777	Proclamation 8031 and Proclamation 8112	All fishing gears, indigeneous exemptions	1,2,3,4,5,6,7,8
WP-2	**National Marine Monument**	Habitat and Vulnerable species	Marianas Trench MNM	71,899	Proclamation 8335	All fishing gears, indigeneous exemptions	1,2,3,4,5,6,7,8
WP-2	**National Marine Monument**	Habitat and Vulnerable species	Rose Atoll MNM	10,147	Proclamation 8337	All fishing gears, indigeneous exemptions	1,2,3,4,5,6,7,8
WP-3	**Year-round Fishery Mgmt./Othe**	Small Vessel and Indigenous Fishery Performance	American Samoa Large Vessel Prohibited Areas*	3,241	50 C.F.R. Part 665.806 (b)(1)*	Pelagic longline vessels > 50 ft	1,2,5,7,8,

WP-3	**Year-round Fishery Mgmt./Othe**	Vulnerable Species	Guam Longline Prohibited Area and Large Vessel Exclusion Zone	14,642	50 C.F.R. Part 665.806(a)(3)	All vessels > 50 ft, pelagic longline, large bottomfish vessels	1,2,5,7,8
WP-3	**Year-round Fishery Mgmt./Other**	Habitat, Vulnerable Species, and Biodiversity	MHI Longline Prohibited Area	96,017	50 C.F.R. Part 665.806(a)(2)	Pelagic Longline	1,2,3,4,5,6,7,8
WP-3	**Ecosystem Conservation**	Habitat, Vulnerable Species, and Biodiversity	Mariana Archipelago Longline Prohibited Area	25,699	50 C.F.R. Part 665.806(a)(4)	Pelagic Longline	1,2,3,4,5,6,7,8
WP-3	**Year-round Fishery Mgmt./Other**	Habitat, Vulnerable Species, and Biodiversity	NWHI Protected Species Zone and Longline Prohibited Area	105,569	50 C.F.R. Part 665.806(a)(2)	Pelagic Longline	1,2,3,4,5,6,8
WP-4	**Year-round Fishery Mgmt./Other**	Vulnerable Species	Southern Exclusion Zone (triggered by TRT for False killer whales)	99,931	50 C.F.R. Part 229.37(d)	Pelagic Longline Gears	1,2,3,4,5,7,8
	Ecosystem Conservation	Habitat	Guam No-Anchor Zone	TBD	50 C.F.R. Part 665.399	Large vessels, bottomfishing gears	1,2,5,7,8
WP-5	**Ecosystem Conservation**	Habitat	Hancock Seamount Bottomfish/Groundfish Prohibited Area	20,340	50 C.F.R. Part 665.202	Bottomfishing and Groundfishing Prohibited	1,2,5,7,8
	Year-round Fishery Mgmt./Other	Habitat Vulnerable Species	Hawaii Precious Coral Conditional Beds and Refugia	TBD	50 C.F.R. Part 665.261	Precious Coral	1,2,5,7,8

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Appendix B - Available in separate file: Conservation Worksheets/Checklists by Region