FISHERY ECOSYSTEM PLAN
for the
HAWAIIAN ARCHIPELAGO

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Working Draft: 10/6/2015 12:18 PM

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PREFACE

In 2005, the Council recommended to establish and implement fishery ecosystem plans for archipelagic, pelagic, and remote island areas in the Western Pacific Region. In order to accomplish this directive, Council staff conducted a series of ecosystem-based fishery management (EBFM) workshop between 2005 and 2007: Ecosystem Science (2005); Social Science (2006); and Management Policy (2007). Previously, the Council managed fisheries in these areas using the single-species management paradigm. Ecosystem-based fishery management addresses a geographically-specified system of fishery-associated organisms (including humans), and the environment and the processes that control its dynamics. It includes noncommercial and commercial fisheries, and recognizes the physical, biological, economic and social interactions among the affected components of the ecosystem. Perhaps most importantly, EBFM seeks to manage for a spectrum of goals society has for fishery ecosystems – some of which may be in competition.

The Council's first fishery ecosystem plans were approved by the Secretary of Commerce in September 2009. However, ecosystem-based fishery management thinking has an extended history in our region. For example, the Council's Executive Director, Kitty Simonds, was an active participant in one of the National Oceanic and Atmospheric Administration's (NOAA) first ecosystem management workshops, in 1986. In 2001, the Council took final action to recommend the first fishery ecosystem management plan in the nation. The Coral Reef Ecosystem Fishery Management Plan encompassed Council-associated coral reef fishery ecosystems in the U.S. Pacific Islands. Among other things, the plan established a process to assess and control ecosystem effects of bottomfish, precious coral, and crustacean fisheries operating federal waters under then-existing fishery management.

The Hawaiian Archipelago FEP is the framework under which the Council will manage place-based fishery ecosystem resources, including the integration of important ecosystem elements important to decision-making. These elements include social, cultural, and economic dimensions, protected species, habitat considerations, climate change effects, and the implications to fisheries from various spatial uses of the marine environment. Successful ecosystem-based fisheries management requires an increased understanding of a range of social and scientific issues, including the societal goals society appropriate management objectives, biological and trophic relationships, ecosystem indicators and models, and the ecological effects of nonfishing activities on the marine environment. Future fishery management actions are anticipated to utilize this information as it becomes available, and adaptive management will be used to further advance the implementation of ecosystem science and principles. In this regard, the success of the EBFM approach relies heavily on the data collection and synthesis process established by the pelagic and archipelago annual fishery ecosystem reports (SAFE Reports). In 2015, the Council, in partnership with the National Marine Fisheries (NMFS) Pacific Islands Fishery Science Center, local fishery resource management agencies, and the NMFS Pacific Islands Regional Office revised and expanded the contents of these reports to include the range of ecosystem elements described above.

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EXECUTIVE SUMMARY

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) is the primary domestic legislation governing management of the nation's marine fisheries. The United States Congress has amended and reauthorized the MSA several times since 1976. The 1996 reauthorization included, among other things, a new emphasis on the precautionary approach. In 2006, an annual catch limit requirement was written in. The MSA contains ten national standards, with which all fishery management plans and plan amendments must conform. The MSA also requires U.S. fisheries management be consistent with the requirements of other regulations including the National Environmental Policy Act, Marine Mammal Protection Act, the Endangered Species Act, the Migratory Bird Treaty Act, and several other Federal laws and Executive Orders.

Under the Magnuson-Stevens Act, the Western Pacific Regional Fishery Management Council (Council) is authorized to prepare and submit to the Secretary of Commerce for approval, disapproval or partial approval, a Fishery Management Plan (FMP) and any necessary amendments, for fisheries that are under its authority and that require conservation and management. The Council transitioned to Fishery Ecosystem Plans (FEPs) from FMPs in 2009. The Council conducts public hearings so that all interested persons may have opportunities to participate in the development of FEPs and amendments.

This Fishery Ecosystem Plan (FEP) governs federal fisheries of the Hawaiian archipelago. The management area is the United States (U.S.) Exclusive Economic Zone (EEZ) of the archipelago. The Plan covers bottomfish, coral reef fish, crustacean, and precious coral stocks and fisheries. The FEP was implemented on September 24, 2009. It replaced a set of species-based FMPs that covered the Western Pacific Region. This version of the FEP was implemented on ____. It strengthens the ecosystem-based fishery management approach, provides the public with additional information regarding the management process, conforms to new information requirements, and is a framework for a clearer understanding of fishery and conservation and management measures promulgated by the FEP and subsequent amendments to it.

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1.1 Mission

The mission of the Western Pacific Regional Fishery Management Council (Council), a federal instrumentality established and authorized by Congress in 1976, is to "plan, coordinate and realize all responsibilities as delegated under the MSA for effective conservation and prudent development of the region's fishery resources for the benefit of the region and the nation." To meet this mission, the Council established the following Guiding Principles:

1. Support quality research and obtain the most complete scientific information available to assess and manage fisheries;
2. Promote an ecosystem approach in fisheries management, including reducing waste in fisheries and minimizing impacts on marine habitat and impacts on protected species;
3. Conduct education and outreach to foster good stewardship principles and broad and direct public participation in the Council's decision making process;
4. Recognize the importance of island cultures and traditional fishing practices in managing fishery resources and foster opportunities for participation;
5. Promote environmentally responsible fishing and the utilization of sustainable fisheries that provide long term economic growth and stability;
6. Promote regional cooperation to manage domestic and international fisheries; and
7. Encourage development of technologies and methods to achieve the most effective level of monitoring, control and surveillance and to ensure safety at sea.

The Council is responsible for developing fishery management policies for the western Pacific region, which includes the State of Hawaii, Territories of American Samoa and Guam, the Commonwealth of the Northern Mariana Islands and other U.S. Pacific remote island areas (Figure 1). All management plans, amendments to them, and regulations implementating them, must comply with the MSA and all other applicable laws – such as the National Environmental Policy Act (NEPA). The Council's primary responsibility is to develop and recommend fishery management measures for any federal managed fishery, stock, or stock complex, as well as measure to protect important ecosystem components, such as protected species and fish habitat.

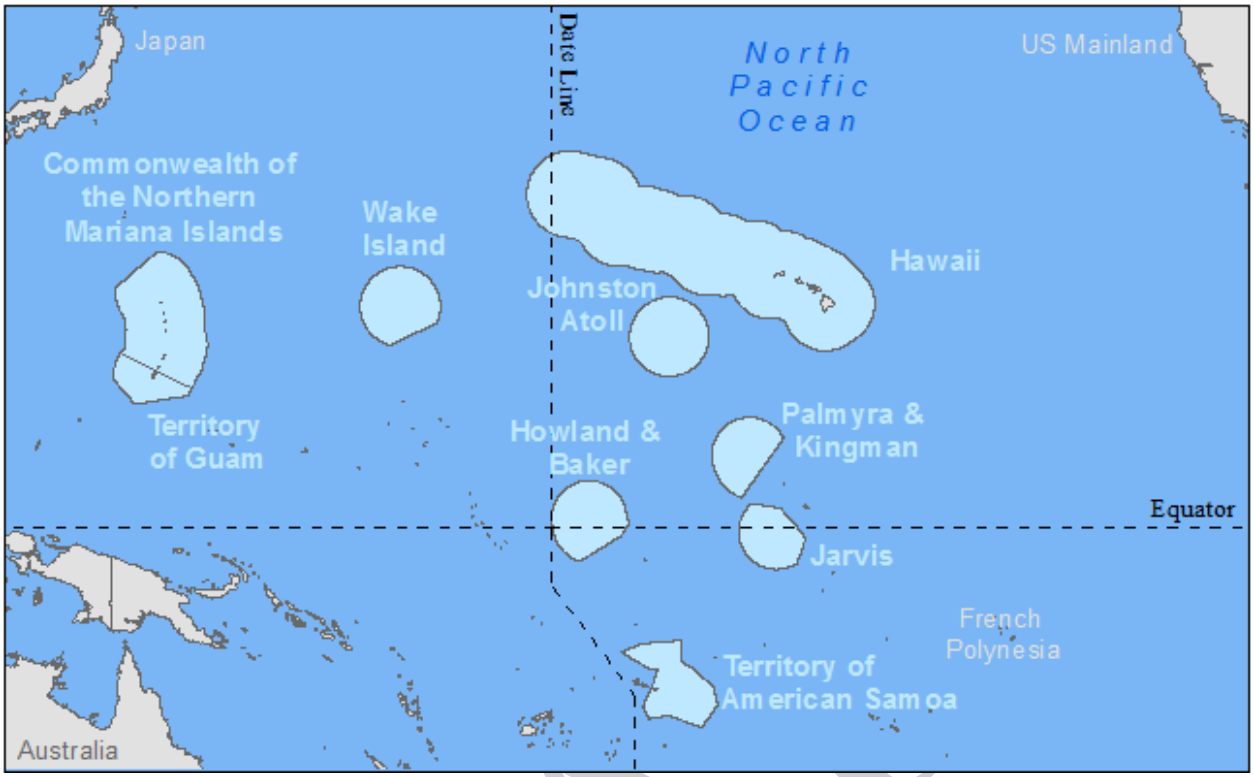

Figure 1: Western Pacific Region

Oure region's archipelagos have distinct cultures, communities, and marine resources. For thousands of years, the indigenous people of these islands relied on healthy marine ecosystems to sustain themselves, their families, and their island communities. Although the past century has brought enormous advancements in transportation and diet, these islanders continue to depend on healthy marine ecosystems, owing to the remoteness of the islands, and their intact cultural practices. Even in the modern period, much ecological, economic, and social benefit is realized from sustainably managing island resources.

1.2 Authorities and Primary Management and Process Drivers

1.2.1 Magnuson-Stevens Fisheries Conservation and Management Act

In 1976, the United States Congress passed the Fishery Conservation and Management Act to promote domestic fisheries and establish management authority over fishery and related resources within the 200 mile federal Exclusive Economic Zone (EEZ). The statute has been subsequently amended and reauthorized over the ensuing years and is now known as the Magnuson-Stevens Fishery Conservation and Management Act (MSA).[1] It is the primary law governing federal management of United States fisheries.

[1] The Magnuson-Stevens Fishery Conservation and Management Act (MSA), as amended through 2006, is available at: http://www.nmfs.noaa.gov/sfa/magact/MSA_Amended_2007%20.pdf

Under the MSA, the United States (U.S.) has exclusive fishery management authority over all fishery resources found within its Exclusive Economic Zone (EEZ). For purposes of the MSA, the inner boundary of the U.S. EEZ extends from the seaward boundary of each coastal state to a distance of 200 nautical miles from the baseline from which the breadth of the territorial sea is measured. In the Mariana Archipelago, the Western Pacific Regional Fishery Management Council (Council) has authority over the fisheries based in, and surrounding, the Territory of Guam and the Commonwealth of the Northern Mariana Islands.

The management system created by the MSA is unique in U.S. natural resource management. In order to avoid top-down, centralized fishery resource management, Congress established eight regional fishery management councils and provided them with responsibility for developing fishery management plans and recommending amendments to those plans on an ongoing basis, as well as regulatory language for implementation. As such, the Councils have a unique relationship with their primary partner federal agency, the National Marine Fisheries Service (NMFS). Councils are composed of federal, state, and territorial fishery management officials, participants in commercial and recreational fisheries, and other individuals with experience, scientific expertise, or training that give them knowledge about fishery conservation and management or commercial or recreational harvest. In addition, the MSA mandates certain advisory bodies (and authorized the Councils to creates others) so as to provide the Councils with technical advice and guidance in fishery policy decision making. The MSA mandates an open, public process for the development of fishery management measures and actions through the Council system.

As in other regions, responsibility for the management of marine resources in the Western Pacific is shared by a number of federal and local government agencies. At the federal level are the Council, the NMFS (also known as the NOAA Fisheries Service), the National Oceanic and Atmospheric Administration (NOAA), the U.S. Fish and Wildlife Service (U.S. Department of the Interior) and the U.S. Department of State. The U.S Coast Guard, in the U.S. Department of Homeland Security, as well as the Department of Defense, through the Air Force, Army, Navy and Marine Corps, also controls access, enforcement, and use of various marine waters throughout the region.

Sixteen members of the Council include the following:

- Regional Administrator, Pacific Islands Regional Office, National Marine Fisheries Service
- Director, Department of Marine and Wildlife Resources, Territory of American Samoa
- Secretary, Department of Land and Natural Resources, Commonwealth of the Northern Mariana Islands
- Director, Department of Agriculture, Territory of Guam
- Chair, Department of Land and Natural Resources, State of Hawaii
- One obligatory member from each of the four island areas nominated by their respected governors and appointed by the Secretary of Commerce
- Four at-large members nominated by the region's Governors and appointed by the Secretary of Commerce.
- District Commander, US Coast Guard 14th District (non-voting member)

- Director, Office of Marine Conservation, US State Department (non-voting member)
- Director, US Fish and Wildlife Service (non-voting member)

The basic functions of the Council as required by the MSA are diverse. For fisheries under its authority that require conservation and management the Council has the following responsibilities:

1. Prepares and transmits to the Secretary fishery ecosystem plans (FEPs) and amendments to such plans as necessary to address changing needs in conservation and management;
2. Prepares comments on any application for foreign fishing transmitted to the Council, and any fishery management plan or amendment transmitted to the Council;
3. Conducts public scoping, meetings and hearings at appropriate times and in appropriate locations in its geographic area[2] so as to allow all interested persons an opportunity to be heard in the development of FEPs and amendments to such plans, and other matters with respect to the administration and implementation of the provisions of the Magnuson-Stevens Act and other Statutory requirements;
4. Submits to the Secretary such periodic reports as the Council deems appropriate and any other relevant report that may be requested by the Secretary;
5. Reviews on a continuing basis, and revises as appropriate, the following for each fishery within its geographical area of authority: assessments and related specifications with respect to the optimum yield (OY); the capacity and extent to which US fish processors will process US harvested fish; and the total allowable level of foreign fishing;
6. Develops annual catch limits (ACLs) for managed fisheries that may not exceed the fishing level recommendations of its Scientific and Statistical Committee (SSC) or similar peer-review process;
7. Develops, in conjunction with its SSC, five-year research priorities for fisheries, fisheries interactions, habitats and other areas of research that are necessary for management purposes; update them as necessary; and submit them to the Secretary of Commerce (Secretary) and the Pacific Islands Fisheries Science Center (PIFSC) of the National Marine Fisheries Service (NMFS) for their consideration in developing research priorities and budgets for the Pacific Islands/Western Pacific Region;
8. May review and provide comments on any federal or state action that may affect fishery habitat under the Council's jurisdiction; and
9. Conducts any other activities that are required by, or provided for in, the MSA or which are necessary and appropriate to the foregoing functions.

[2] "Geographic area" may include an area under the authority of another Council if the fish in the fishery concerned migrate into, or occur in, that area or if the matters being heard affect fishermen of that area.

1.2.1.1 National Standards

To carry out the above functions, the Council pays particular attention to 10 National Standards (NS) described in the MSA, against which the Council's recommendations to the Secretary are measured:

1. Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the OY from each fishery for the United States fishing industry.
2. Conservation and management measures shall be based upon the best scientific information available.
3. To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range and interrelated stocks of fish shall be managed as a unit or in close coordination.
4. Conservation and management measures shall not discriminate between residents of different States. If it becomes necessary to allocate or assign fishing privileges among various United States fishermen, such allocation shall be fair and equitable to all such fishermen; reasonably calculated to promote conservation; and carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of such privileges.
5. Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose.
6. Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources and catches.
7. Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication.
8. Conservation and management measures shall, consistent with the conservation requirements of the MSA (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of NS 2 in order to provide for the sustained participation of such communities, and, to the extent practicable, minimize adverse economic impacts on such communities.
9. Conservation and management measures shall, to the extent practicable, minimize bycatch and, to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.
10. Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

1.2.1.2 Essential Fish Habitat

In 1996, Congress passed the Sustainable Fisheries Act, which amended the MSA and added several new FMP provisions. From an ecosystem management perspective, the identification and description of essential fish habitat (EFH) for all federally managed species were among the most important of these additions.

According to the MSA, EFH is defined as "those waters and substrate necessary to fish for spawning, breeding or growth to maturity." This new mandate represented a significant shift in fishery management. Because the provision required councils to consider a MUS's ecological role and habitat requirements in managing fisheries, it allowed Councils to move beyond the traditional single-species or multispecies management to a broader ecosystem-based approach. In 1999, NMFS issued guidelines intended to assist Councils in implementing the EFH provision of the MSA, and set forth the following four broad tasks:

1. Identify and describe EFH for all species managed under an FMP.
2. Describe adverse impacts to EFH from fishing activities.
3. Describe adverse impacts to EFH from non-fishing activities.
4. Recommend conservation and enhancement measures to minimize and mitigate the adverse impacts to EFH resulting from fishing and non–fishing related activities.

The guidelines recommended that each Council prepare a preliminary inventory of available environmental and fisheries information on each managed species. Such an inventory is useful in describing and identifying EFH, as it also helps to identify missing information about the habitat utilization patterns of particular species. The guidelines note that a wide range of basic information is needed to identify EFH. This includes data on current and historic stock size, the geographic range of the managed species, the habitat requirements by life history stage, and the distribution and characteristics of those habitats. Because EFH has to be identified for each major life history stage, information about a species' distribution, density, growth, mortality, and production within all of the habitats it occupies, or formerly occupied, is also necessary.

The guidelines also state that the quality of available data used to identify EFH should be rated using the following four-level system:

Level 1:	All that is known is where a species occurs based on distribution data for all or part of the geographic range of the species.
Level 2:	Data on habitat-related densities or relative abundance of the species are available.
Level 3:	Data on growth, reproduction, or survival rates within habitats are available.
Level 4:	Production rates by habitat are available.

With higher quality data, those habitats most utilized by a species could be identified, allowing a more precise designation of EFH. Habitats of lesser value to a species may also be essential, depending on the health of the fish population and the ecosystem. For example, if a species is overfished, and habitat loss or degradation is thought to contribute to its overfished condition, all habitats currently used by the species may be essential.

The EFH provisions are especially important because of the procedural requirements they impose on both Councils and federal agencies. First, for each FMP, Councils must identify adverse impacts to EFH resulting from both fishing and non-fishing activities, and describe measures to minimize these impacts. Under § 305(b)(2) of the MSA, federal agencies are required to consult with NMFS on any action authorized, funded, or undertaken by the agency

that may adversely affect EFH identified by the Council. Councils are not required to provide conservation and enhancement recommendations except for anadromous species. In 2002, NMFS revised the guidelines by providing additional clarifications and guidance to ease implementation of the EFH provisions by Councils.

Based on the best available information on habitats in waters of the Hawaiian Archipelago and the existing fisheries, the Council has determined that the fisheries operating in Hawaii are not expected to have adverse impacts on EFH or Habitat Areas of Particular Concern (HAPC; a subset of EFH) for managed species. Continued and future operations of fisheries under the Hawaiian Archipelago FEP are not likely to lead to substantial physical, chemical, or biological alterations to the habitat, or result in loss of, or injury to, these species or their prey.

The description and identification of EFH and HAPC for fisheries managed under this FEP can be found in Section 3, Management Regime and Fishery Information. Information related to activities that may adversely affect EFH and EFH maps can be found in Appendices 4 and 5. Life history and habitat information on managed species, on which the EFH descriptions are based, may be found in the EFH Source Document available on the Council's web site. The most up-to-date EFH maps are also available on the Council web site.

1.2.2 National Marine Fisheries Service Guidance

Primary authority for implementing and enforcing management action developed under the MSA rests with the U.S. Secretary of Commerce (Secretary), who has delegated this responsibility to the NMFS. The NMFS develops guidance to aid the Councils, fishermen and others to develop, implement and comply with fishery regulations. In addition, the Council and NMFS have established operating agreements to help define specific roles and responsibilities for developing, approving, and implementing fishery management plans and other actions under the auspices of the MSA. Such guidance documents and agreements include, but are not limited to, *Operational Guidelines for Fishery Management Process* and *Regional Operating Agreements*.

1.2.3 National Environmental Policy Act

The National Environmental Policy Act (NEPA) requires federal agencies to assess and consider the effects of major federal actions on the quality of the human environment by considering the environmental impacts of proposed actions and reasonable alternatives to those actions. The Act also requires that the public be provided the opportunity to help identify, review and comment on such effects, particularly in cases where an environmental impact statement (EIS) is being prepared.

NEPA requires an environmental impact statement (EIS) for major federal actions that significantly affect the quality of the human environment. Agencies may conduct an environmental assessment to determine whether an EIS is necessary or whether a Finding of No Significant Impact (FONSI) or a Categorical Exclusion (CE) is warranted.

At the time of the final decision (and in the case of an EIS, at least 30 days after the Final EIS is noticed and at least 90 days after the Draft EIS is noticed), agencies must have prepared a record of decision (ROD), FONSI, or determined that a CE applies. It is important to be aware of the interaction of NEPA and MSA timing requirements. For example, the deadline for the Secretary

to approve, disapprove, or partially approve a Council-submitted FMP or Amendment (i.e., 30 days after the close of the comment period on the FMP or Amendment and often referred to as "Day 95") should not occur prior to signing the ROD or the FONSI. If it is an FEIS, the ROD may not be signed sooner than 30 days after noticing the availability of the FEIS.

1.2.4 Endangered Species Act

The Endangered Species Act (ESA) provides for the conservation of species that are endangered or threatened, and the conservation of the ecosystems on which they depend. Section 7(a)(2) of the ESA requires each federal agency to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. To "jeopardize" means to reduce appreciably the likelihood of survival and recovery of a species in the wild by reducing its numbers, reproduction, or distribution. As described in the NMFS policy for Integration of Endangered Species Act Section 7 with the Magnuson-Stevens Act Processes (PD 01-117), the Council plays an integral role in these consultations.

When a federal agency's action "may affect" an ESA-listed species, that agency is required to consult formally with NMFS (for marine species, some anadromous species, and their designated critical habitats) or the U.S. Fish and Wildlife Service (USFWS; for terrestrial and freshwater species or their designated critical habitat). The product of formal consultation is the agency's biological opinion (BiOp). Federal agencies are exempt from this formal consultation requirement if they have concluded that an action "may affect, but is not likely to adversely affect" ESA-listed species or their designated critical habitat, and NMFS or USFWS concur with that conclusion (see 50 CFR § 402.14(b)).

The ESA also prohibits the taking[3] of listed species except under limited circumstances. Western Pacific regional fisheries are operated in accordance with terms of ESA consultations that consider the potential interactions of fisheries with listed species, the impacts of interactions on the survival and recovery of listed species, and the protection of any designated critical habitat.

As provided in 50 CFR § 402.16, NMFS is required to reinitiate formal consultation if:

(1) the amount or extent of the incidental take is exceeded;
(2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in an opinion;
(3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in the opinion; or
(4) a new species is listed or critical habitat designated that may be affected by the action.

Fisheries operating under this FEP have the potential to interact with a range of protected species. A current list of ESA listed species applicable to the Hawaii FEP is included in the Annual Report (SAFE). Additional information regarding protected species interactions in this FEP is included in Section 3.4.2.

[3] The definition of "take" includes to harass, harm, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct.

1.2.5 Marine Mammal Protection Act

The Marine Mammal Protection Act (MMPA) prohibits, with certain exceptions, the take of marine mammals in the U.S. EEZ and by U.S. citizens on the high seas, and the importation of marine mammals and marine mammal products into the United States. The MMPA gives the Secretary authority and duties for the protection and conservation of all cetaceans (whales, dolphins, and porpoises) and pinnipeds (seals and sea lions, except walruses). The MMPA requires NMFS to prepare and periodically review marine mammal stock assessments (see 16 U.S.C. § 1361, *et seq*.).

Pursuant to the MMPA, NMFS has promulgated specific regulations that govern the incidental take of marine mammals during fishing operations (50 CFR 229). Under section 118 of the MMPA, NMFS must publish, at least annually, a List of Fisheries that classifies U.S. commercial fisheries into three categories, based on relative frequency of incidental mortality and serious injury to marine mammals in each fishery:

- Category I designates fisheries with frequent serious injuries and mortalities incidental to commercial fishing. Annual mortality and serious injury of a stock in a given fishery is by itself responsible for the annual removal of greater than or equal to 50 percent or more of any stock's potential biological removal (PBR) level.

- Category II designates fisheries with occasional serious injuries and mortalities incidental to commercial fishing. Annual mortality and serious injury of a stock in a given fishery is, collectively with other fisheries, responsible for the annual removal of greater than 10 percent of any stock's PBR level, and is by itself responsible for the annual removal of between 1 and less than 50 percent, exclusive, of any stock's PBR level.

- Category III designates fisheries with a remote likelihood or no known serious injuries or mortalities. A Category III fishery is, collectively with other fisheries, responsible for the annual removal of 10 percent or less of any stock's PBR level; or collectively with other fisheries, more than 10 percent of any stock's PBR level, but is by itself responsible for the annual removal of 1 percent or less of PBR level.

Owners of vessels or gear engaging in a Category I or II fishery are required under 50 CFR 229.4 to obtain authorization to lawfully incidentally take non-ESA listed marine mammals by registering with NMFS' marine mammal authorization program. Fishermen participating in Category I or II fisheries are also required to accommodate an observer onboard upon request by NMFS, and are required to comply with any applicable take reduction plans. Current List of Fisheries classifications for fisheries operating under the Hawaii FEP are included in the archipelagic annual fishery report (SAFE Report).

Section 101 (a)(5)(E) of the MMPA requires the Secretary of Commerce to allow the incidental, but not intentional, taking of individuals from marine mammal stocks that are designated as depleted because of listing as threatened or endangered under the ESA in the course of commercial fishing operations if it is determined that three criteria are met:

1. Incidental mortality and serious injury will have a negligible impact on the affected species or stock;

2. A recovery plan has been developed or is being developed; and
3. Where required under section 118 of the MMPA, a monitoring program has been established, vessels engaged in such fisheries are registered in accordance with section 118 of the MMPA, and a take reduction plan (TRP) has been developed or is being developed for such species or stock.

1.3 Hawaiian Archipelago

1.3.1 Geography

The Hawaiian Archipelago is an island chain in the central North Pacific Ocean. It runs for approximately 1,500 miles in a northwest direction, from Hawaii Island in the southeast to Kure Atoll in the northwest and is among the most isolated island areas in the world. The chain can be divided according to the large and mountainous Main Hawaiian Islands (MHI) (Hawaii, Maui, Lanai, Molokai, Kahoolawe, Oahu, Kauai, and Niihau) and the small, low-lying Northwest Hawaiian Islands (NWHI), which include Necker, French Frigate Shoals, Laysan, and Midway atoll. The largest of the MHI is Hawaii Island at just over 4,000 square miles – the largest in Polynesia, while Kahoolawe is the smallest, at 44.6 square miles.

The archipelago developed as the Pacific plate moved slowly over a hotspot in the Earth's mantle. Thus, the islands on the northwest end of the archipelago are older; it is estimated that Kure Atoll is approximately 28 million years old while Hawaii Island is approximately 400,000 years old. The highest point in Hawaii is Mauna Kea, at approximately 13,800 feet.

The Main Hawaii Islands are all in tropical latitudes. The archipelago becomes subtropical at about French Frigate Shoals (23° 46’ N).The climate of the Hawaiian Islands is generally tropical, but there is great climactic variation, due primarily to elevation and leeward vs. windward areas. Easterly trade winds bring much of the rain, and so the windward sides of all the islands are typically wetter. The south and west (leeward) sides of the islands tend to be drier. Hawaii receives the majority of its precipitation from October to April, while drier conditions generally prevail from May to September. Tropical storms and hurricanes occur in the northern hemisphere hurricane and typhoon season, which runs from June through November.

There is a fairly little shallow water habitat in Hawaii, owing to the islands’ steep rise from the abyssal deep. However, there are some larger areas, such as Penguin Bank between Oahu and Molokai, which are relatively shallow. Hawaii has extensive coral reef habitat, though the MHI, because they are much younger, have less shallow and fringing reef habitat than the NWHI.

1.3.2 People

1.3.2.1 Indigenous Culture

The first settlers to Hawaii brought with them their contemporary Polynesian traditions and customs, which had evolved over generations on the islands from which they migrated. These ancient practices continued to evolve in response to new surroundings, and a distinct subculture took shape. Hawaiian culture became truly unique, highly structured and sophisticated once the era of transpacific migrations ended. At its zenith, Hawaiian language, mythology, song, dance,

artistry, and cuisine would have been familiar to other Pacific Islanders, but they would have been unable to immediately and effortlessly operate within Hawaiian practices and norms.

Modern Hawaii culture is based on a mix of ancient and newer practices, especially those from places like Japan, southeast Asia, other Pacific islands, and the U.S. Mainland. For example, it is customary in Hawaii when visiting a home to bring a small gift for the host (often food), and thus, gatherings are usually potluck. It is also typical to remove one's shoes before entering a home and Hawaiian families, regardless of ethnicity, usually celebrate a child's first birthday with a luau (traditionally known as an *'aha'aina*).However, the glue that binds these disparate practices together remains that of *aloha* – more of a bundle of concepts than a single word.

1.3.2.2 Current Demographics

According to the U.S. Census Bureau, Hawaii's estimated population in 2014 was a little more than 1.4 million people. This was an increase of 4.4% from the 2010 Census, due to natural increase (births minus deaths) and an increase in net migration. However, some of Hawaii's population is comprised of relatively short duration military residents as well as transient or tourist residents (as of 2011, the U.S. military reported it had 39,827 personnel on the islands).[4] More than 80% of Hawaii's residents lived on the heavily-population island of Oahu.

Just over 50% of the population is male. The racial composition of Hawaii is: Asian 38.6%, White 24.7%, Mixed 23.6%, Native Hawaiian and Other Pacific Islander 10.0%, Hispanic or Latino 1.6%%, Black or African American 1.2%, and American Indian and Alaskan Native 0.3%.

The average projected lifespan of people born in Hawaii in 2000 is 79.8 years; 77.1 years if male, 82.5 if female. This is the longest projected average lifespan of any U.S. state.

The government of Hawaii is a constitutional government reminiscent of the Constitutional Monarchy of the Kingdom of Hawaii in 1840, and the statehood model of the U.S. Federal Government. The Hawaii Government's current structure was established in its constitution. It follows a general republic model, in that the government is divided into three branches: the executive, legislative, and judiciary.

The state government is fairly centralized – most executive powers are concentrated in the Governor's office. The primary unit of local government is the county. Hawaii is divided into four counties: Kauai County, the City and County of Honolulu, Maui County, and Hawaii County. The counties operate under a mayor-council model and have some governing autonomy. However, the state House of Representatives and the Senate determine the county council budgets. Two of the eight Main Hawaiian Islands, Lanai and Niihau, are nearly or completely privately owned.

[4] http://www.globalsecurity.org/military/library/report/2011/hst1103.pdf

1.3.2.3 Fishing Communities

The MSA defines a fishing community as a community which is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs, and includes fishing vessel owners, operators, and crew and United States fish processors that are based in such community.

The Hawaii Islands are like other island communities in the Western Pacific, where the surrounding ocean and its resources have long provided residents with a source of food and opportunities for maritime commerce and recreation. Because participants in Hawaii's various marine fisheries are not concentrated in specific locales but rather reside in villages and small towns across the islands, and because fishing, seafood, and fishing-related businesses assume extensive social and economic importance throughout the region, the Council recommended in 2002 that the Secretary of Commerce designate each of the Main Hawaiian Islands as fishing communities under the MSA[5].

The social and economic interplay between Hawaii residents and the surrounding ocean environment is central to an understanding of community life in the archipelago. The islands are relatively small and most towns and villages are located along the coastal zone. As such, the ocean is an ongoing visual presence in the lives of all residents. Because Hawaii is one of the most isolated island chains on the planet, goods must be transshipped on or over thousands of miles of ocean. This has led to a relatively high cost of living and limited availability of certain goods and services. The tourism economy is closely related to recreation and leisure opportunities along the coastal zone, and it too is conditioned by distance of travel to the islands. Fishing activities are important across the Hawaii, and living marine resources are used for commercial sale, household consumption, and as a source of recreation. Various aspects of local and indigenous history, culture, and society are closely related to the surrounding ocean and use of its resources.

[5]Federal Register Vol. 68, No. 150, August 5, 2003, 46112

2 MANAGEMENT POLICY, GOALS, AND OBJECTIVES

2.1 Council Management Policy

The Council's management policy is to apply responsible and proactive management practices, based on sound scientific data and analysis and inclusive of fishing community members, to conserve and manage fisheries and their associated ecosystems of the Hawaiian archipelago.

2.2 Hawaii FEP Purpose and Need

The Hawaiian archipelago contains various stocks and stock complexes that are found in federal waters and which provide important benefits to the people of the state and by extension, the Nation. Since these resources are in need of management, the Council is required under the MSA to develop management plans to accomplish this. In addition, the habitats for these fish, as well as other elements of the marine ecosystem, such as sea turtles, cetaceans, and corals, are also locally and nationally important. Since all of these are interconnected, the Council opted in the mid-2000s[6] to take an archipelagic ecosystem-based approach to fisheries managed and spent the next several years revising its species/complex-based fishery management plans (FMPs) to place-based fishery ecosystem plans (FEPs). The Council's Precious Corals FMP (1983), Crustaceans FMP (1983), Bottomfish and Seamount Groundfish (1986), Pelagics FMP (1987), and Coral Reef Ecosystems FMP (2001) were transitioned to the place-based five FEPs in 2009 that include the American Samoa Archipelago FEP, Mariana Islands Archipelago FEP, Hawaiian Archipelago FEP, Pacific Remote Island Area FEP, and Pacific Pelagic FEP.

The Council's decision to transition to ecosystem-based fishery management (EBFM) followed Congressional direction in 1996 to the NMFS to establish an Ecosystem Principles Advisory Panel (Panel; EPAP). The Panel was tasked with assessing the extent to which ecosystem principles were being or could be used in fisheries management and recommending how to further ecosystem principle use to improve the status and management of marine resources. The Panel was composed of members of academia, fishery and conservation organizations, and fishery management agencies (see below). The NMFS finalized an EBFM Policy Directive in 2016.

2.3 Hawaiian Archipelago Fishery Ecosystem Plan Goals

The Hawaiian Archipelago FEP establishes a framework under which the Council can recommend management measures required by federal law and best available scientific information. The NMFS EPAP described above reached consensus that the Councils and NMFS should develop and implement Fishery Ecosystem Plans in order to manage U.S. fisheries and marine resources in a more comprehensive and integrated manner (NMFS 1999).

The National Oceanic and Atmospheric Administration (NOAA) defines an ecosystem approach as "management that is adaptive, specified geographically, takes account of ecosystem

[6] At its 130th meeting held December 20, 2005, the Council took final action to recommend implementation of place-based FEPs for the Western Pacific Region.

knowledge and uncertainties, considers multiple external influences, and strives to balance diverse social objectives" In addition, because of the wide-ranging nature of ecosystems, successful implementation of ecosystem approaches will need to be incremental and collaborative (NOAA 2004).

On international, national, and local levels, institutions and agencies tasked with managing marine resources are moving toward an ecosystem approach to fisheries management. One reason for this shift is a growing awareness that many of Earth's marine resources are stressed and the ecosystems that support them are degraded. In addition, increased concern regarding the potential impacts of fishing and non-fishing activities on the marine environment, and a greater understanding of the relationships between ecosystem changes and population dynamics, have all fostered support for a holistic approach to fisheries management that is science based and forward thinking (Pikitch et al. 2004).

In order to achieve EBFM, this plan: 1. identifies the management objectives of the Hawaiian Archipelago FEP; 2. delineates the boundaries of the Hawaiian Archipelago FEP; 3. designates the management unit species included in the Hawaiian Archipelago FEP; 4. details the federal fishery regulations applicable under the Hawaiian Archipelago FEP; and 5. establishes appropriate Council structures and advisory bodies to provide scientific and management advice to the Council regarding the Hawaiian Archipelago FEP. In addition, this plan provides the information and rationale for these measures; discusses the key components of the Hawaiian archipelago ecosystem, including an overview of the region's non-pelagic fisheries; and explains how the measures contained here are consistent with the MSA and other applicable laws.
This FEP has four goals:

Goal 1. Conserve and manage target and non-target stocks;
Goal 2. Protect species and habitats of special concern;
Goal 3. Understand and account for important ecosystem parameters and their linkages, and;
Goal 4. Meet the needs of fishermen, their families, and communities in the Hawaiian archipelago.

2.4 Hawaii FEP Objectives

To achieve the policy and goals of the Hawaiian Archipelago FEP, the Council has adopted the following objectives:

OBJECTIVE 1. Support Fishing Communities

a. Identify the various social and economic groups within the region's fishing communities and their interconnections.
b. Ensure that regulations designed to meet conservation objectives are written to be as minimally-constraining as possible.
c. Select alternatives that minimize adverse economic impacts to fishing communities when possible.
d. Eliminate regulations that are no longer necessary (i.e., eliminate access barriers).
e. Increase communication between fishery sectors.
f. Support fishery development, training and processing opportunities.

g. Support projects, programs and policies that increase sustainable fishing opportunities.

OBJECTIVE 2: Prevent Overfishing on Council-managed Stocks
a. Develop status determination criteria for appropriate stocks.
b. Monitor fisheries to understand when overfishing may be close to occurring.

OBJECTIVE 3. Improve Fishery Monitoring and Data Collection
a. Increase the number of fishery ecosystem elements being monitored.
b. Improve the timeliness of data availability.
c. Improve the quantity and quality of relevant fishery data.
d. Encourage research to improve precision of data regarding protected species populations and distributions.
e. Increase research coordination between the Council, the state, and federal agencies.

OBJECTIVE 4. Promote Compliance
a. Understand factors that may result in non-compliance.
b. Consider ways to develop or increase buy-in from affected parties.
c. Ensure that regulations are written and implemented so as to be easy to follow and enforce.
d. Develop codes of conduct specific to individual fisheries.

OBJECTIVE 5. Reduce Bycatch and Minimize Interactions and Impacts to Protected Species
a. Promote viable methods and technologies that may reduce interactions with seabirds, marine mammals, sea turtles, corals, and other protected species.
b. Increase fishermen's knowledge about protected species issues and regulations and ways to minimize interactions.
c. Continue to work with federal and state agencies to protect relevant threatened and endangered species.
d. Encourage programs to obtain or improve information regarding the status of relevant threatened or endangered species.
e. Encourage research that examines whether and to what extent bycatch is an issue in the fisheries covered by this management plan.

a. OBJECTIVE 6. Refine and Minimize Impacts to Essential Fish Habitat Review and update EFH and HAPC designations on regular schedule (5-years) based on the best available scientific information of a higher EFH level than was used for the original designation.
b. Identify and prioritize research to: assess adverse impacts to EFH and HAPC from fishing and non-fishing activities, including, but not limited to, offshore energy developments, aquaculture, and mining; and activities that introduce non-point source pollution into the coastal environment.

OBJECTIVE 7. Increase Traditional and Local Knowledge in Decision-making

a. Identify relevant indigenous and local practices and knowledge that may improve scientific inquiry regarding Council-managed fisheries.
b. Utilize cultural practitioners, concepts, and bodies in the analysis of management alternatives.
c. Utilize fishermen knowledge in the analysis of management alternatives.

OBJECTIVE 8: Rebuild Overfished Stocks

a. Maintain the Hancock Seamounts Ecosystem Area.
b. Maintain the fishing moratorium within the Hancock Seamounts Ecosystem Area, until surveys show that the armorhead stock has been rebuilt.
c. Participate in international conservation and management efforts to rebuild armorhead stocks.
d. Identify research priorities for armorhead and other relevant species within the Hancock Seamounts Ecosystem Area.

OBJECTIVE 9. Consider the Implications of Spatial Management Arrangements in Council Decision-making

a. Identify and prioritize research that examines the positive and negative consequences of current no-take fishing areas to fisheries, fishery ecosystems, and fishermen, such as the Bottomfish Fishing Restricted Areas, military installations, NWHI restrictions, and Marine Life Conservation Districts.
b. Consider whether the goals of any spatial-based fishing restrictions proposed in federal waters appear to be achievable.
c. Establish effective spatially-based fishing zones
d. Remove spatial-based fishing restrictions that are no longer necessary.

OBJECTIVE 10. Consider the Implications of Climate Change in Council Decision-making

a. Identify and prioritize research that examines the effects of climate change on Council-managed fisheries and fishing communities.
b. Ensure climate change considerations are incorporated into the analysis of management alternatives.
c. Monitor climate-change related variables via the Council's Annual Reports.
d. Engage in climate change outreach with US Pacific Islands communities.

3 MANAGEMENT REGIME AND FISHERY INFORMATION

3.1 Main Hawaiian Islands Fisheries

The Main Hawaiian Islands (MHI) consists of the populated islands in the Southeastern portion of the Hawaiian archipelago. The MHI includes Hawaii Island, Maui, Kahoolawe, Lanai, Molokai, Oahu, Kauai and Niihau. It also includes the various offshore banks (e.g. Penguin Bank, Cross Seamount, etc.) and islets (e.g. Kaula Rock) that surround the waters of these islands.

3.1.1 Bottomfish and Seamount Groundfish Fishery

3.1.1.1 Description (commercial, charter, recreational)

Bottomfish fishing was a part of the economy and culture of the indigenous people of Hawaii long before European explorers first visited the islands. Descriptions of traditional fishing practices indicate that Native Hawaiians harvested the same deep-sea bottomfish species as the modern fishery and used some of the same specialized gear and techniques employed today.

The deep-slope bottomfish fishery in Hawaii concentrates on species of eteline snappers (e.g., opakapaka), carangids (e.g., jacks), and a single species of grouper (hapuupuu) concentrated at depths of 30–150 fathoms. The management unit species are found in Table 1.

In the small-boat bottomfish fishery that is active around the MHI, the distinction between recreational and commercial fishermen is extremely tenuous, with many otherwise recreational fishermen selling small amounts of fish to cover trip expenses. With the exception of noncommercial fishing participants fishing in federal waters, the MHI bottomfish fishery is not subject to federal permit or reporting requirements but commercial fishermen (those who sell one fish during the year) are required to obtain commercial marine licenses (CML) and to submit State catch reports of fishing activity, including all catches and bycatch (discards), on a per trip basis (5 days after completion of the trip). It is difficult to separate catches originating from State (0-3 miles from shore) vs. Federal (3-200 miles from shore) waters as HDAR uses catch reporting forms which do not differentiate these areas. As a result, information on MHI catches is not spatially separated and, unless otherwise noted, represents catches from both State and Federal waters around the MHI.

The number of fishermen engaged in commercial bottomfish fishing in the MHI increased dramatically in the 1970s and peaked at nearly 600 vessels in the mid-1980s. Participation declined in the early 1990s, but rebounded somewhat in the late 1990s. By 2003 participation had reached its lowest level since 1977 with only 325 active vessels (WPRMC 2004). Since then, participation has increased slightly to 401 active vessels reporting sales of bottomfish. Data from various surveys indicate that the importance of the MHI bottomfish fishery varies significantly among fishermen of different islands. According to a 1987 survey of boat fishing club members, bottomfish represented roughly 13 percent of the catch of Hawaii fishermen, 25 percent of the catch of Oahu and Kauai fishermen, and 75 percent of the catch of Maui fishermen (Meyer Resources 1987). A survey of licensed commercial fishermen conducted about the same time indicated that the percentage of respondents who used bottomfish fishing methods was 25

percent on Hawaii, 28 percent on Kauai, 29 percent on Oahu, 33 percent on Lanai, 50 percent on Molokai, and 51 percent on Maui (Harman and Katekaru 1988). Presumably, the differences among islands relate to the proximity of productive bottomfish fishing grounds.

Oahu-based landings account for roughly 30 percent of the MHI commercial landings of deepwater bottomfish species from 1998 to 2004. Maui landings from the same time period represent 36 percent of total MHI deepwater bottomfish landings, with Hawaii, Kauai and Molokai/Lanai representing 18, 10 and 5 percent, respectively (Kawamoto and Tao 2005). Specific bottomfish fishing locales favored by fishermen vary seasonally according to sea conditions and the availability and price of target species. Historically, Penguin Bank is one of the most important bottomfish fishing grounds in the MHI, as it is the most extensive shallow shelf area in the MHI and within easy reach of major population centers. Penguin Bank is particularly important for the MHI catch of uku, one of the few bottomfish species available in substantial quantities to Hawaii consumers during summer months.

Figure 2 provides a map of the MHI with bottomfish management areas and Essential Fish Habitat.

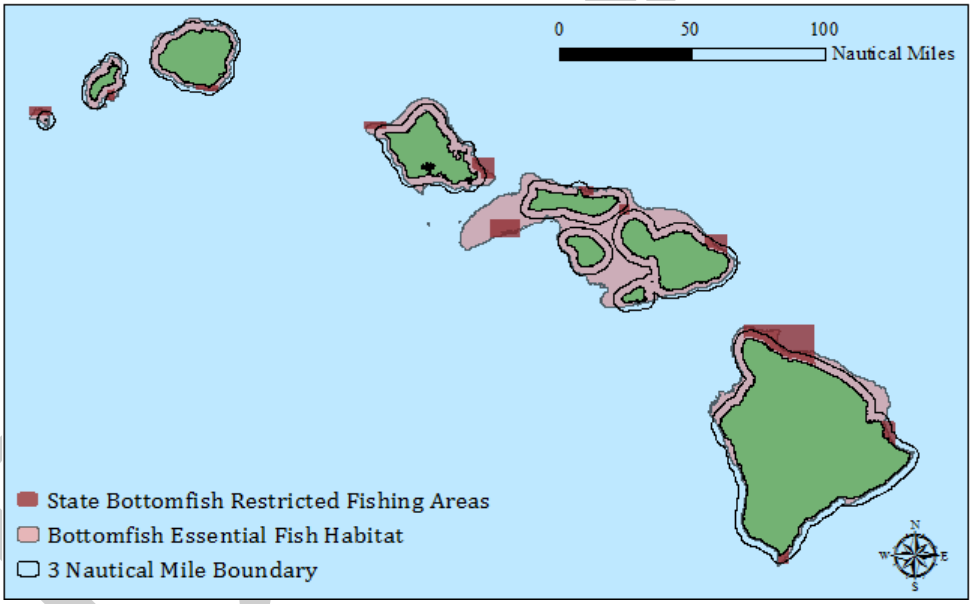

Figure 2: MHI Bottomfish Management Map

3.1.1.2 Type and Quantity of Fishing Gear

Bottomfish gear and fishing strategies are highly selective for desired species and sizes. Bottomfishers use a hook-and-line method of fishing in which weighted and baited lines are lowered and raised with electric, hydraulic, or hand-powered reels. The main line is typically 400–450 pounds test, with hook leaders of 80–120 pound test monofilament. The hooks are circle hooks, and a typical rig uses six to eight hooks branching off the main line. The weight is typically 5–6 pounds. The hook leaders are typically 2–3 feet long and separated by about 6 feet along the main line. Squid is the bait typically used. It is sometimes supplemented with a chum bag containing chopped fish or squid suspended above the highest hook. The bottomfish fishery

may also utilize pelagic trolling gear (rod and reels) during transit to and from bottomfish fishing grounds.

3.1.1.3 Catch in Number or Weight

The 2004-2014 average catch of Hawaii BMUS (Figure 3) was 294,167 lbs. with a high of 425,844 (2004) and a low of 192,318 (2011). Over the same period, an average of 83% of the catch was sold. For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

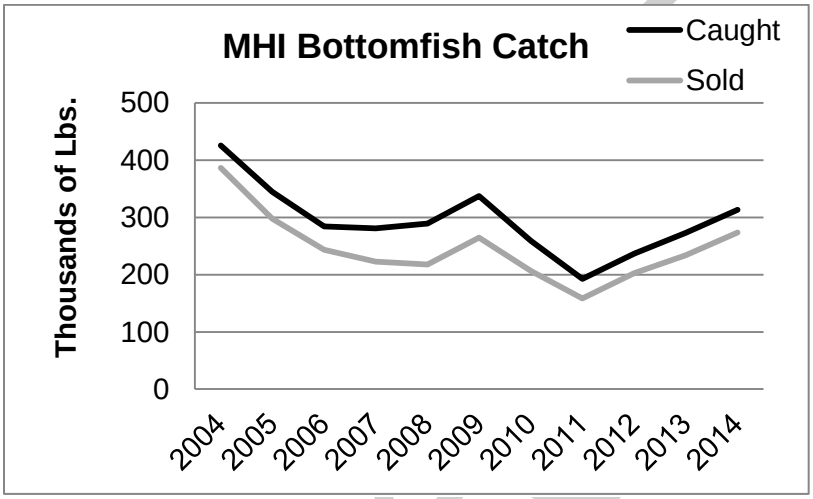

Figure 3. MHI Bottomfish Catch Trend 2004-2014.

3.1.1.4 Economics

The 2004-2014 average for direct revenue from Hawaii BMUS was $1,462,008 with a high of $1,968,285 (2004) and a low of $980,403 (2011). For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.5 Present and Probably Future Condition of the Fishery

Currently the MHI bottomfish fishery is managed through annual catch limits which are based on stock assessments periodically produced by the PIFSC. The MHI deep-7 fishery has not exceeded its ACL in the past three years. Annual specifications are monitored through the State of Hawaii CML and dealer reporting programs. Should the fishery reach its ACL prior to the end of the fishing year, coordinated state and federal closures would be processed through the Chapter 91 and FEP regulatory processes, respectively. Accountability measures would then be considered by the Council prior to the opening of the fishery in the next fishing year. The NWHI bottomfish remains closed after the establishment of the NWHI Marine National Monument.

For past fishery performance statistics refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.6 Yield

3.1.1.6.1 MSY

A 2011 stock assessment report by PIFSC (Brodziak et al. 2011) provides recent estimates of MSY for Hawaii's deep-7 bottomfish complex. A stock assessment update was produced in 2014 but was rejected by the CIE reviewers (cite CIE reports). The best science available was determined to be the Brodziak et al 2011 with data updated to2013 (Boggs memo dated March 3, 2015). Although the report's stock assessment considers the Hawaiian bottomfish stocks to be a single, archipelago-wide multispecies complex, annual MSY estimates for the MHI is 0.404 million pounds. The harvest rate at MSY was estimated at 3.8% and the biomass at MSY was at 14.51 million pounds. MSY is estimated every three years. For current MSY estimates, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.6.2 OY

Optimum yield for Hawaii's bottomfish fishery is defined as the amount of fish that will be caught by fishermen fishing in accordance with applicable fishery regulations in this plan, in the EEZ and adjacent waters around the Hawaiian archipelago. The current OY is equal to the Annual Catch Limit for the bottomfish fishery, sicne the ACL specification accounts for social, ecological, and economic factors, as well as management uncertainty.

3.1.1.6.3 Extent to Which Fishing Vessels will Harvest OY

Domestic vessels have sufficient capacity to harvest the entire OY. Therefore, the domestic processing capacity and domestic processing levels will equal or exceed the harvest for the foreseeable future. Therefore the level of Total Allowable Foreign Fishing (TALFF) appears to be zero.

3.1.1.6.4 Extent to Which U.S. Fish Processors will Process OY

Bottomfish harvested in Hawaii are marketed as fresh product with little processing done to each piece. What processing is done is conducted by each vessel, usually at catch at sea.

3.1.1.7 MSA Conservation and Management Measures

Below are several important conservation and management measures for this fishery. Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and Appendix C. Contact the Council or the National Marine Fisheries Service Pacific Islands Regional Office for and the fishery compliance guides (www.pir.noaa.gov).

Table 1 provides a description of which bottomfish species are being managed under the FEP.

Table 1: Hawaiian Archipelago Bottomfish Management Unit Species

Scientific Name	English Common Name	Local Name
Deep-7 BMUS		
Aphareus rutilans	silver jaw jobfish	lehi
P. filamentosus	pink snapper	ʻōpakapaka
P. seiboldii	pink snapper	kalekale
P. zonatus	snapper	gindai
E. quernus	sea bass	hāpuʻupuʻu

Scientific Name	English Common Name	Local Name
Etelis carbunculus	red snapper	ehu
E. coruscans	longtail snapper	onaga or ʻulaʻula koaʻe
Non-deep 7 BMUS		
Lutjanus kasmira	blue stripe snapper	taʻape
Pristipomoides auricilla	yellowtail snapper	kalekale
Aprion virescens	gray jobfish	uku
Caranx ignobilis	giant trevally	white papio/ulua au kea
C. lugubris	black jack	ulua laʻuli
Pseudocaranx dentex	thicklip trevally	pig ulua, butaguchi
Seriola dumerili	amberjack	kahala
Seamount Groundfish		
Hyperoglyphe japonica	raftfish	NA
Beryx splendens	alfonsin	NA
Pseudopentaceros wheeleri	armorhead	NA

3.1.1.7.1 Management Areas and Sub-areas

The fishery management area in the Hawaiian Archipelago FEP is divided into three sub-areas: (1) Main Hawaiian Islands (MHI); (2) Northwestern Hawaiian Islands (NWHI); and (3) Hancock Seamount. The NWHI sub-area is further divided into the Hoʻomalu Zone (that portion of the EEZ around the NWHI west of 165°W. longitude) and the Mau Zone (that portion of the EEZ around the NWHI between 161°' W longitude and 165° W longitude). Figure 4 shows the management areas and sub areas.

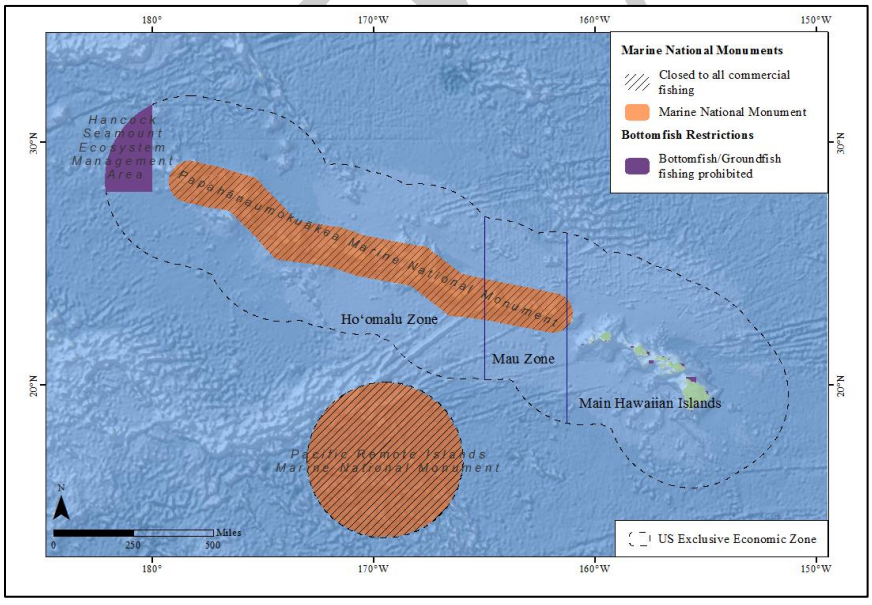

Figure 4: Bottomfish Fishery Management Areas in the Hawaii Archipelago

3.1.1.7.2 Permit and Reporting Requirements

A Federal bottomfish permit is required for vessel owners and fishermen to conduct vessel-based non-commercial fishing for any bottomfish management unit species in Federal waters around

the MHI (except customers of charter fishing trips). The operators and owners of non-commercial fishing vessels must submit daily Federal logbooks that document bottomfish fishing effort and catch for each fishing trip. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks.

To date, there are no Federal permitting or reporting requirements for commercial vessel operators targeting or harvesting bottomfish MUS in the MHI; however, commercial fishery participants (those who sell at least one fish during the year) must obtain commercial marine licenses from HDAR and submit monthly fishing reports (this reporting requirement is reinforced by a Federal regulation requiring compliance with State reporting requirements).

3.1.1.7.3 Gear Restrictions and Prohibitions

Gear restrictions include prohibitions against the use or possession of bottom trawls and bottom set gillnets; and the use or possession of poisons, explosives, or intoxicating substances to harvest bottomfish or seamount groundfish in the bottomfish fishery.

3.1.1.7.4 At-sea Observer Coverage

All fishing vessels with bottomfish permits must carry an on-board observer when directed to do so by NMFS. Vessel owners or operators will be given at least 72 hour prior notice by NMFS of an observer requirement. Required standards of treatment and accommodations for observers must be followed.

3.1.1.7.5 Framework Procedures for Regulatory Adjustments

By June 30 of each year, a Council-appointed bottomfish monitoring team will prepare an annual report on the fishery by area covering the following topics: fishery performance data; summary of recent research and survey results; habitat conditions and recent alterations; enforcement activities and problems; administrative actions (e.g., data collection and reporting, permits); and state and territorial management actions. Indications of potential problems warranting further investigation may be signaled by the following indicator criteria: mean size of the catch of any species in any area is a pre-reproductive size; ratio of fishing mortality to natural mortality for any species; harvest capacity of the existing fleet and/or annual landings exceed best estimate of MSY in any area; significant decline (50 percent or more) in bottomfish catch per unit of effort from baseline levels; substantial decline in ex-vessel revenue relative to baseline levels; significant shift in the relative proportions of gear in any one area; significant change in the frozen/fresh components of the bottomfish catch; entry/exit of fishermen in any area; per-trip costs for bottomfishing exceed per-trip revenues for a significant percentage of trips; significant decline or increase in total bottomfish landings in any area; change in species composition of the bottomfish catch in any area; research results; habitat degradation or environmental problems; and reported interactions between bottomfish fishing operations and protected species.

The team may present management recommendations to the Council at any time. Recommendations may cover actions suggested for federal regulations, state/territorial action, enforcement or administrative elements, and research and data collection. Recommendations will include an assessment of urgency and the effects of not taking action. The Council will evaluate the team's reports and recommendations, and the indicators of concern. The Council will assess the need for one or more of the following types of management action: catch limits, size limits,

closures, effort limitations, access limitations, or other measures. The Council may recommend management action by either the state/territorial governments or by federal regulation.

If the Council believes that management action should be considered, it will make specific recommendations to the NMFS Regional Administrator after requesting and considering the views of its Scientific and Statistical Committee and Bottomfish Advisory Panel and obtaining public comments at a public hearing. The Regional Administrator will consider the Council's recommendation and accompanying data, and, if he or she concurs with the Council's recommendation, will propose regulations to carry out the action. If the Regional Administrator rejects the Council's proposed action, a written explanation for the denial will be provided to the Council within two weeks of the decision. The Council may appeal denial by writing to the Assistant Administrator, who must respond in writing within 30 days.

3.1.1.7.6 Bycatch Measures

Bycatch in Hawaii's bottomfish fisheries comes from a mixed, commercial, subsistence and recreational fishery in the MHI. The MHI fishery participants tend to be selective and generally keep every fish caught. Federal regulatory measures in place to reduce bycatch include prohibitions on the use of non-selective fishing methods including bottom trawls, bottom gillnets, explosive and poisons. As there is a moratorium on the seamount groundfish fishery, there is no bycatch or bycatch mortality associated with the fishery.

Five types of non-regulatory measures aimed at reducing bycatch and bycatch mortality, and improving bycatch reporting are also being implemented. They include: 1) outreach to fishermen and engagement of fishermen in management, including research and monitoring activities, to increase awareness of bycatch issues and to aid in development of bycatch reduction methods; 2) research into fishing gear and method modifications to reduce bycatch quantity and mortality; 3) research into the development of markets for discard species; 4) improvement of data collection and analysis systems to better quantify bycatch and 5) outreach and training of fishermen in methods to reduce barotrauma in fish that are to be released.

3.1.1.7.7 Annual Catch Limit

3.1.1.7.7.1 Specification Mechanism

For the MHI bottomfish fishery, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The ACL is specified annually by NMFS based on recommendations from the Council.

3.1.1.7.7.2 Limit

For the recent MHI Deep-7 and non-deep 7 Bottomfish Annual Catch Limits, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.7.7.3 Accountability Measures

Accountability measures are specified on an annual basis by NMFS based on recommendations by the Council. There is near-real-time monitoring of MHI Deep-7 bottomfish catches at a one-week lag. Other BMUS have a one-month lag. Catches are monitored through the State of

Hawaii CML reporting system. The specification of accountability measures follows the process described in Appendix E.

3.1.1.7.8 Criteria for Determining Overfishing

Biological and fishery data are poor for all bottomfish species in Hawaii. Generally, data are only available on commercial landings by species and catch-per-unit-effort (CPUE) for the multi-species complexes as a whole. At this time, it is not possible to partition these effort measures among the various bottomfish MUS for any fishery except the MHI, where effort data are available for the four major species caught.

The overfishing criteria and control rules are applied to individual species within the multi-species stock whenever possible. When this is not possible, they are based on an indicator species for the multi-species stock. It is important to recognize that individual species are affected differently based on this type of control rule, and it is important that for any given species, fishing mortality does not exceed a level that would lead to its required protection under the Endangered Species Act (ESA). For the seamount groundfish stocks, armorhead serves as the indicator species. No indicator species are used for the four bottomfish multi-species stock complexes (American Samoa, CNMI, Guam and Hawaii). Instead, the control rules are applied to each of the four stock complexes as a whole.[7]

The MSY control rule is used as the maximum fishing mortality threshold (MFMT). The MFMT and minimum stock size threshold (MSST) are specified based on recommendations in Restrepo et al. (1998) and both are dependent on the natural mortality rate (M). The range of M among species within a stock complex is taken into consideration when estimating and choosing the M to be used for the purpose of computing the reference point values.

In addition to the thresholds MFMT and MSST, a warning reference point, B_{FLAG}, is also specified at a point above the MSST to provide a trigger for consideration of management action prior to B reaching the threshold. MFMT, MSST, and B_{FLAG} are specified as indicated in Table 2: Overfishing Threshold Specifications: Bottomfish and Seamount Groundfish Stocks.

Table 2: Overfishing Threshold Specifications: Bottomfish and Seamount Groundfish Stocks

MFMT	MSST	B_{FLAG}
$F(B) = \frac{F_{MSY} B}{c\, B_{MSY}}$ for $B \le c\, B_{MSY}$ $F(B) = F_{MSY}$ for $B > c\, B_{MSY}$	$c\, B_{MSY}$	B_{MSY}

[7] The National Standards Guidelines allow overfishing of "other" components in a mixed stock complex if (1) long-term benefits to the nation are obtained, (2) similar benefits cannot be obtained by modification of the fishery to prevent the overfishing, and (3) the results will not necessitate ESA protection of any stock component or ecologically significant unit.

where c = max (1-M, 0.5)

Standardized values of fishing effort (E) and catch-per-unit-effort (CPUE) are used as proxies for F and B, respectively, so E_{MSY}, $CPUE_{MSY}$, and $CPUE_{FLAG}$ are used as proxies for F_{MSY}, B_{MSY}, and B_{FLAG}, respectively. In cases where reliable estimates of $CPUE_{MSY}$ and E_{MSY} are not available, they will be estimated from catch and effort times series, standardized for all identifiable biases. $CPUE_{MSY}$ would be calculated as half of a multi-year average reference CPUE, called $CPUE_{REF}$. The multi-year reference window would be objectively positioned in time to maximize the value of $CPUE_{REF}$. E_{MSY} will be calculated using the same approach or, following Restrepo et al. (1998), by setting E_{MSY} equal to E_{AVE}, where E_{AVE} represents the long-term average effort prior to declines in CPUE. When multiple estimates are available, the more precautionary one is used.

3.1.1.8 Regulations implementing International Recommendations and other Applicable Laws

There are no international recommendations or applicable laws that relate to bottomfish and seamount groundfish in Hawaii. However, the North Pacific Seamount Regional Fishery Management Organization's (RFMO) efforts may include actions aimed at seamount groundfish, and potentially bottomfish, in the future. Such actions may have the potential to impact Hawaii bottomfish and seamount groundfish fisheries.

3.1.1.9 Bycatch

3.1.1.9.1 Amount

For the most recent bycatch numbers in Hawaii bottomfish fishery, see the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.1.9.2 Type

Economic Discards

Two data sources have been used to assess bycatch rates in this fishery. Logbook data compiled by the Hawaii Division of Aquatic Resources (HDAR) indicate the reported disposition of the catch from all trips. Data were also compiled from 26 NWHI fishing trips that carried observers between October 1990 and December 1993 (Nitta 1999). The observer coverage represented 12 percent of the 209 trips made during that period. Two species, kahala (*Seriola dumerili*) and butaguchi (*Pseudocaranx dentex*), made up the majority of the bycatch. Less than 5 percent of the catch of kahala was retained, and between about 50 and 75 percent of the catch of butaguchi was retained. Relatively large percentages of the catch of certain other species, including white ulua (*Caranx ignobilis*), were discarded, but these species' contribution to the catch was relatively small, so their contribution to absolute discards was relatively small. Non-BMUS that had relatively high-percentage discard rates (but relatively low absolute discard rates) in the observer data included opelu (*Decapturus* spp.), sharks, and a number of reef- associated species.

Target species are often discarded if they are damaged by predators. Sharks are responsible for most damage, but Hawaiian monk seals and bottlenose dolphins also cause damage. The carangids tend to be discarded because of their short shelf life and low market value. Butaguchi, for example, is palatable but of generally low value. Kahala, once a major component of

commercial and recreational landings, is now seldom retained because it has been implicated in incidents of ciguatera poisoning (Kasaoka 1989).

Although the logbook and observer data represent two different time periods and cannot be strictly compared, substantial differences between the two indicate probable shortcomings in the logbook data. The average overall discard rate indicated by the logbook data is 13 percent, compared with 25 percent for the observer data. The differences suggest that the logbook data—at least for some species—probably do not reliably reflect actual bycatch rates. The biggest differences were for the two most commonly discarded species: butaguchi and kahala. The two datasets indicated similar percentage discard rates for kahala, but the logbook data indicated a substantially lower contribution of kahala to the total catch. The same was true for butaguchi, but the percentage bycatch rates indicated in the two datasets were also substantially different. Thus, as is common in many fisheries, underreporting of commonly discarded species appears to be a shortcoming of the logbook data. In 2003, NMFS redeployed observers to the NWHI bottomfish fishery, in part, to collect additional bycatch observations and to calibrate the shortfall in discard reporting.

3.1.1.9.3 Standardized Reporting Methodology

Disposition of fish caught and released in the MHI bottomfish fishery is recorded through trip reporting as required by the State CML and Federal Bottomfish permit.

3.1.1.10 Identification and Description of EFH and HAPC

Except for several of the major commercial species, very little is known about the life histories, habitat utilization patterns, food habits, or spawning behavior of most adult bottomfish and seamount groundfish species. Furthermore, very little is known about the distribution and habitat requirements of juvenile bottomfish.

Generally, the distribution of adult bottomfish in the Western Pacific Region is closely linked to suitable physical habitat. Unlike the U.S. mainland with its continental shelf ecosystems, Pacific islands are primarily volcanic peaks with steep drop-offs and limited shelf ecosystems. The BMUS under the Council's jurisdiction are found concentrated on the steep slopes of deepwater banks. The 100-fathom isobath is commonly used as an index of bottomfish habitat. Adult bottomfish are usually found in habitats characterized by a hard substrate of high structural complexity. The total extent and geographic distribution of the preferred habitat of bottomfish is not well known. Bottomfish populations are not evenly distributed within their natural habitat; instead, they are found dispersed in a non-random, patchy fashion. Deepwater snappers tend to aggregate in association with prominent underwater features, such as headlands and promontories.

There is regional variation in species composition, as well as a relative abundance of the MUS of the deepwater bottomfish complex in the Western Pacific Region. In American Samoa, Guam, and the Northern Mariana Islands, the bottomfish fishery can be divided into two distinct fisheries: a shallow- and a deep-water bottomfish fishery, based on species and depth. The shallow-water (0–100 m) bottomfish complex comprises groupers, snappers, and jacks in the genera *Lethrinus*, *Lutjanus*, *Epinephelus*, *Aprion*, *Caranx*, *Variola,* and *Cephalopholis.* The deep-water (100–400 m) bottomfish complex comprises primarily snappers and groupers in the

genera *Pristipomoides, Etelis, Aphareus, Epinephelus,* and *Cephalopholis*. In Hawaii, the bottomfish fishery targets several species of eteline snappers, carangids, and a single species of grouper. The target species are generally found at depths of 50–270 meters.
To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for bottomfish assemblages pursuant to Section 600.805(b) of 62 FR 66551. The species complex designations include deep-slope bottomfish (shallow water and deep water) and seamount groundfish complexes. The designation of these complexes is based on the ecological relationships among species and their preferred habitat. These species complexes are grouped by the known depth distributions of individual BMUS throughout the Western Pacific Region.

3.1.1.10.1 Description and Identification of EFH

At present, there are insufficient data on the relative productivity of different habitats to develop EFH designations based on Level 3 or Level 4 data. Given the uncertainty concerning the life histories and habitat requirements of many BMUS, the Council designated EFH for adult and juvenile bottomfish as the water column and all bottom habitat extending from the shoreline to a depth of 400 meters (200 fathoms) encompassing the steep drop-offs and high-relief habitats that are important for bottomfish throughout the Western Pacific Region.
The eggs and larvae of all BMUS are pelagic, floating at the surface until hatching and subject thereafter to advection by the prevailing ocean currents. There have been few taxonomic studies of these life stages of snappers (lutjanids) and groupers (epinepheline serranids). Presently, few larvae can be identified to species. As snapper and grouper larvae are rarely collected in plankton surveys, it is extremely difficult to study their distribution. Because of the existing scientific uncertainty about the distribution of the eggs and larvae of bottomfish, the Council designated the water column extending from the shoreline to the outer boundary of the EEZ to a depth of 400 meters as EFH for bottomfish eggs and larvae throughout the Western Pacific Region.

3.1.1.10.2 Identification of Habitat Areas of Particular Concern

On the basis of the known distribution and habitat requirements of adult bottomfish, the Council designated all escarpments/slopes between 40–280 meters throughout the Western Pacific Region, including the Hawaiian Archipelago, as bottomfish HAPC. In addition, the Council designated the three known areas of juvenile opakapaka habitat (two off Oahu and one off Molokai) as HAPC. The basis for this designation is the ecological function that these areas provide, the rarity of the habitat, and the susceptibility of these areas to human-induced environmental degradation. Off Oahu, juvenile snappers occupy a flat, open bottom of primarily soft substrate in depths ranging from 40 to 73 meters. This habitat is quite different from that utilized by adult snappers. Surveys suggest that the preferred habitat of juvenile opakapaka in the waters around Hawaii represents only a small fraction of the total habitat at the appropriate depths. Areas of flat featureless bottom have typically been thought of as providing low-value fishery habitat. It is possible that juvenile snappers occur in other habitat types, but in such low densities that they have yet to be observed.
The discovery of concentrations of juvenile snappers in relatively shallow water and featureless bottom habitat indicates the need for more research to help identify, map, and study nursery habitat for juvenile snapper.

3.1.1.11 Seamount Groundfish Essential Fish Habitat

In the past, a large-scale foreign seamount groundfish fishery extended throughout the southeastern reaches of the northern Hawaiian Ridge. The seamount groundfish complex consists of three species (pelagic armorheads, alfonsins, and ratfish). These species are found at 200–600 meters on the submarine slopes and summits of seamounts. A collapse of the seamount groundfish stocks greatly reduced yield in recent years. Although a moratorium on the harvest of the seamount groundfish within the EEZ has been in place since 1986, no substantial recovery of the stocks has been observed. Historically, there has been no domestic seamount groundfish fishery.

3.1.1.11.1 Description and Identification of EFH

The life histories and distributional patterns of seamount groundfish are also poorly understood. Data are lacking on the effects of oceanographic variability on migration and recruitment of individual management unit species. On the basis of the best available data, the Council designated the EFH for the adult life stage of the seamount groundfish complex as all waters and bottom habitat bounded by latitude 29°–35° N and longitude 171° E–179° W between 80–600 meters. EFH for eggs, larvae, and juveniles is the epipelagic zone (0-200 m) of all waters bounded by latitude 29°–35° N and longitude 171° E–179° W. This EFH designation encompasses the Hancock Seamounts, part of the northern extent of the Hawaiian Ridge, located 1,500 nautical miles northwest of Honolulu.

3.1.1.11.2 Identification of Habitat Areas of Particular Concern

There is no HAPC for seamount designated within the Hawaiian Archipelago.

3.1.2 Coral Reef Fishery

3.1.2.1 Description (commercial, charter, recreational)

The majority of the total commercial catch of inshore fishes, invertebrates, and seaweed comes from nearshore reef areas around the MHI; however harvests of some coral reef species also occur in federal waters (e.g., around Penguin Bank). Total catches of coral reef ecosystems species are dominated by bigeye scad and mackerel scad, and variations in their harvests have largely driven the downward trend observed in the 2000-2005 time period. Other species reported by commercial fishermen include surgeonfishes, goatfishes, squirrelfishes and parrotfishes. Because Hawaii state reporting grids do not account for state versus federal waters, catch and other fishery data that come from state reporting forms are aggregated across state and federal water surrounding the Hawaiian archipelago. Information on the number of fishery participants is unavailable.

In recent decades, there appears to have bee a decline in nearshore fishery resources in the MHI. Excessive fishing is considered to be one of the major causes of this decline. Coastal construction, sedimentation, and other effects of urbanization have also caused extensive damage to coral reefs and benthic habitat near the populated islands affecting productivity of the coral reef fish stocks.

With the exception of the FEP's special permit requirement, there are no reporting requirements for recreational and other non-commercial catches from waters around the Hawaiian archipelago,

but creel surveys at Kaneohe, Hanalei, and Hilo Bays suggest that these catches are at least equivalent to the reported commercial catch, and may be two or three times greater. The majority of these catches is believed to be from State waters; however, the ecosystem approach, as well as National Standard 3, compels the Council to consider inshore fisheries and stocks as they interrelate with those in Federal waters.

3.1.2.2 Type and Quantity of Fishing Gear

All gears used to catch coral reef species are essentially artisanal in nature. Catch rates are minimal, usually only a few pounds per man hour or other unit of effort. Large catches thus depend on fishing methods employing a lot of people, such as driven-in-net fishing or group spear fishing. Four fishing gears predominate in Hawaiian archipelago coral reefs and lagoons: hook and line (including handline), spearguns, fish traps, and gillnets.

3.1.2.3 Catch in Numbers or Weight

For the recent catch of coral reef fish, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.2.4 Fishing Areas

Coral reef taxa are currently harvested primarily in Hawaii State waters. No permits for collection of potentially-harvested coral reef taxa (PHCRT) in federal waters have yet been issued, thus there appears to be no fishery for PHCRT. The majority of the total commercial catch of inshore fishes, invertebrates, and seaweed comes from nearshore reef areas around the MHI; however, harvests of some currently-harvested coral reef taxa (CHCRT) also occur in federal waters (e.g., around Penguin Bank). The total catches of coral reef ecosystems species are dominated by mostly coastal pelagics followed by strict reef fished. Other species reported by commercial fishermen include surgeonfishes, goatfishes, squirrelfishes and parrotfishes.

3.1.2.5 Time of Fishing

Fishing for coral reef fish can be done day or night and any time of the year in Hawaii and is dependent upon the biology of the species.

3.1.2.6 Number of Hauls

The coral reef fishery is conducted using hauls.

3.1.2.7 Economics

Cesar et al. (2002) examined the direct revenue associated with Hawaii's coral reef fisheries. Based on assumptions about non-bottomfish and non-pelagics species represented in the state of Hawaii data file, the authors estimate a total value of US$ 1.8 million/year for reef-associated commercial fisheries in Hawaii.

3.1.2.8 Present and Probable Future Condition of the Fishery

The status of the current coral reef fisheries is largely unknown. Stock assessment data across the MUS is limited. However, length-based indicators showed only few species are being impacted by fisheringor other factors (Nadon et. al, 2015).

3.1.2.9 Yield

3.1.2.9.1 Maximium Sustainable Yield

National Standard 1 guidelines define MSY as "the largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological, environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets." Given the diversity of the fishery and the species it harvest, coral reef fisheries are considered data-limited due to the absence of stock assessments. The Western Pacific region utilizes a data-limited approach to estimate sustainable yield levels.

For ACL specification purposes, Maximum Sustainable Yields in the coral reef fisheries are determine by using the Biomass-Augmented Catch-MSY approach (Sabater and Kleiber 2014). This method estimates MSY using a plausible combination rate of population increase (denoted by r) and carrying capacity (denoted by k) assumed from the catch time series, resilience characteristics (from FishBase), and biomass from existing underwater census surveys done by the Pacific Island Fisheries Science Center. This method is applied to species complexes grouped by taxonomic families.

3.1.2.9.2 Optimum Yield

The MSA defines OY as "the amount of fish that will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems as prescribed on the basis of the MSY from the fishery, as reduced by any relevant economic, social, or ecological factor." National Standard 1 guidelines define OY as "is a long-term average amount of desired yield from a stock, stock complex, or fishery after economic, social or ecological factors are considered." For the purpose of managing Hawaii coral reef fisheries, OY is equal to the ACLs, since the ACL speifciation process considers social, ecological, and economic factors, as well as management uncertainties.

3.1.2.9.3 Extent to Which Fishing Vessels will Harvest OY

Domestic harvesting capacity is unknown, because participation in the fishery is unknown. Howverm, the biomass to fishing effort ratio foir most species is likely favorable in terms of sustainability.

3.1.2.9.4 Extent to Which U.S. Fish Processors will Process OY

Reef fish are sold whole via fresh fish retailers or directly by the fishermen along the roadside. Little no no processing is involved in the fishery.

3.1.2.10 MSA Conservation and Management Measures

Below are several important conservation and management measures for this fishery. Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and Appendix C. Contact the Council or the National Marine Fisheries Service Pacific Islands Regional Office for and the fishery compliance guides (www.pir.noaa.gov).

3.1.2.10.1 Management Unit Species

Table 3 and Table 4 provide which coral reef ecosystem species are managed under the FEP and designated as Management Unit Species (MUS).

Table 3: Hawaiian Archipelago Coral Reef Ecosystem Management Units Species, Currently Harvested Coral Reef Taxa

Family Name	Scientific Name	English Common Name	Local Name
Acanthuridae (Surgeonfishes)	*Acanthurus olivaceus*	orange-spot surgeonfish	na‘ena‘e
	Acanthurus xanthopterus	yellowfin surgeonfish	pualu
	Acanthurus triostegus	convict tang	manini
	Acanthurus dussumieri	eye-striped surgeonfish	palani
	Acanthurus nigroris	blue-lined surgeon	maiko
	Acanthurus leucopareius	whitebar surgeonfish	maiko or maikoiko
	Acanthurus nigricans	whitecheek surgeonfish	NA
	Acanthurus guttatus	white-spotted surgeonfish	‘api
	Acanthurus blochii	ringtail surgeonfish	Pualu
	Acanthurus nigrofuscus	brown surgeonfish	mai‘i‘i
	Ctenochaetus strigosus	yellow-eyed surgeonfish	kole
	Ctenochaetus striatus	striped bristletooth	NA
	Naso unicornus	bluespine unicornfish	kala
	Naso lituratus	orangespine unicornfish	kalalei or umaumalei
	Naso hexacanthus	black tongue unicornfish	kala holo
	Naso annulatus	whitemargin unicornfish	kala
	Naso brevirostris	spotted unicornfish	kala lolo
	Naso caesius	gray unicornfish	NA
	Zebrasoma flavescens	yellow tang	lau‘ipala
Acanthuridae (Surgeonfishes)			

Family Name	Scientific Name	English Common Name	Local Name
Balistidae (Triggerfish)	*Melichthys vidua*	pinktail triggerfish	humuhumu hiʻukole
	Melichthys niger	black triggerfish	humuhumu ʻeleʻele
	Rhinecanthus aculeatus	picassofish	humuhumu nukunuku apuaʻa
	Sufflamen fraenatum	bridled triggerfish	NA
Carangidae (Jacks)	*Selar crumenophthalmus*	bigeye scad	akule or hahalu
	Decapterus macarellus	mackerel scad	ʻopelu or ʻopelu mama
Carcharhinidae (Sharks)	*Carcharhinus amblyrhynchos*	grey reef shark	manō
	Carcharhinus galapagensis	galapagos shark	manō
	Carcharhinus melanopterus	blacktip reef shark	manō
	Triaenodon obesus	whitetip reef shark	manō lalakea
Holocentridae (Solderfish/ Squirrelfish	*Myripristis berndti*	bigscale soldierfish	menpachi or ʻuʻu
	Myripristis amaena	brick soldierfish	menpachi or ʻuʻu
	Myripristis chryseres	yellowfin soldierfish	menpachi or ʻuʻu
	Myripristis kuntee	pearly soldierfish	menpachi or ʻuʻu
	Sargocentron microstoma	file-lined squirrelfish	ʻalaʻihi
	Sargocentron diadema	crown squirrelfish	ʻalaʻihi
	Sargocentron punctatissimum	peppered squirrelfish	ʻalaʻihi
	Sargocentron tiere	blue-lined squirrelfish	ʻalaʻihi
	Sargocentron xantherythrum	Hawaiian squirrelfish	ʻalaʻihi

Family Name	Scientific Name	English Common Name	Local Name
	Sargocentron spiniferum	saber or long jaw squirrelfish	ʻalaʻihi
	Neoniphon spp.	spotfin squirrelfish	ʻalaʻihi
Kuhliidae (Flagtails)	*Kuhlia sandvicensis*	Hawaiian flag-tail	ʻaholehole
Kyphosidae (Rudderfish)	*Kyphosus biggibus*	rudderfish	nenue
	Kyphosus cinerascens	rudderfish	nenue
	Kyphosus vaigiensis	rudderfish	nenue
Labridae (Wrasses)	*Bodianus bilunulatus*	saddleback hogfish	ʻaʻawa
	Oxycheilinus unifasciatus	ring-tailed wrasse	poʻou
	Xyrichtys pavo	razor wrasse	laenihi or nabeta
	Cheilio inermis	cigar wrasse	kupoupou
	Thalassoma purpureum	surge wrasse	hoʻu
	Thalassoma quinquevittatum	red ribbon wrasse	NA
	Thalassoma lutescens	sunset wrasse	NA
	Novaculichthys taeniourus	rockmover wrasse	NA
Mullidae (Goatfishes)	*Mulloidichthys* spp.	yellow goatfish	weke
	Mulloidichthys pfleugeri	orange goatfish	weke nono
	Mulloidichthys vanicolensis	yellowfin goatfish	wekeʻula
	Mulloidichthys flavolineatus	yellowstripe goatfish	wekeʻa or weke aʻa
	Parupeneus spp.	banded goatfish	kumu or moano
	Parupeneus bifasciatus	doublebar goatfish	munu
	Parupeneus cyclostomas	yellowsaddle goatfish	moano kea or moano kale

Family Name	Scientific Name	English Common Name	Local Name
	Parupeneus pleurostigma	side-spot goatfish	malu
	Parupeneus multifaciatus	multi-barred goatfish	moano
	Upeneus arge	bandtail goatfish	weke pueo
Mugilidae (Mullets)	*Mugil cephalus*	stripped mullet	ʻamaʻama
	Neomyxus leuciscus	false mullet	uouoa
Muraenidae (Moray eels)	*Gymnothorax flavimarginatus*	yellowmargin moray eel	puhi paka
	Gymnothorax javanicus	giant moray eel	puhi
	Gymnothorax undulatus	undulated moray eel	puhi laumilo
	Enchelycore pardalis	dragon eel	puhi
Octopodidae (Octopus)	*Octopus cyanea*	octopus	heʻe mauli or tako
	Octopus ornatus	octopus	heʻe or tako
Polynemidae	*Polydactylus sexfilis*	threadfin	moi
Priacanthidae (Big-eyes)	*Heteropriacanthus cruentatus*	glasseye	ʻaweoweo
	Priacanthus hamrur	bigeye	ʻaweoweo
Scaridae (Parrotfish)	*Scarus* spp.	parrotfish	uhu or palukaluka
	Calotomus carolinus	stareye parrotfish	panuhunuhu
Sphyraenidae (Barracuda)	*Sphyraena helleri*	Heller's barracuda	kaweleʻa or kaku
	Sphyraena barracuda	great barracuda	kaku
Turbinidae	*Turbo* spp.	green snails turban shells	NA
Zanclidae	*Zanclus cornutus*	moorish idol	kihikihi
Chaetodontidae	*Chaetodon auriga*	butterflyfish	kikakapu
	Chaetodon lunula	raccoon butterflyfish	kikakapu
	Chaetodon ephippium	saddleback butterflyfish	kikakapu
Sabellidae		featherduster worm	NA

Table 4: Hawaiian Archipelago Coral Reef Ecosystem Management Unit Species, Potentially Harvested Coral Reef Taxa

Scientific Name	English Common Name	Local Name
Labridae	wrasses (Those species not listed as CHCRT)	hinalea
Carcharhinidae Sphyrnidae	sharks (Those species not listed as CHCRT)	manō
Dasyatididae Myliobatidae	rays and skates	hihimanu
Serrandiae	groupers, seabass (Those species not listed as CHCRT or in BMUS)	roi, hapuʻupuʻu
Malacanthidae	tilefishes	NA
Carangidae	jacks and scads (Those species not listed as CHCRT or in BMUS)	dobe, kagami, paʻopaʻo, papa, omaka, ulua,
Holocentridae	solderfishes and squirrelfishes (Those species not listed as CHCRT)	ʻuʻu
Mullidae	goatfishes (Those species not listed as CHCRT)	weke, moano, kumu
Acanthuridae	surgeonfishes (Those species not listed as CHCRT)	naʻenaʻe, maikoiko
Echeneidae	remoras	NA
Muraenidae Congridae Ophichthidae	eels (Those species not listed as CHCRT)	puhi
Apogonidae	cardinalfishes	ʻupapalu
Clupeidae	herrings	NA
Engraulidae	anchovies	nehu
Caracanthidae	coral crouchers	NA

Scientific Name	English Common Name	Local Name
Gobiidae	gobies	ʻoʻopu
Lutjanidae	snappers (Those species not listed as CHCRT or in BMUS)	toʻau
Aulostomus chinensis	trumpetfish	nunu
Fistularia commersoni	cornetfish	nunu peke
Zanclidae	moorish Idols	kihikihi
Chaetodontidae	butterflyfishes	kikakapu
Pomacanthidae	angelfishes	NA
Pomacentridae	damselfishes	mamo
Scorpaenidae	scorpionfishes, lionfishes	nohu, okoze
Blenniidae	blennies	pa oʻo
Sphyraenidae	barracudas (Those species not listed as CHCRT)	kaku
Pinguipedidae	sandperches	NA
Bothidae Soleidae Pleurnectidae	flounders and soles	pakiʻi
Ostraciidae	trunkfishes	makukana
Balistidae	trigger fishes (Those species not listed as CHCRT)	humuhumu
Kyphosidae	rudderfishes (Those species not listed as CHCRT)	nenue
Cirrhitidae	hawkfishes (Those species not listed as CHCRT)	poʻopaʻa
Tetradontidae	puffer fishes and porcupine fishes	ʻoʻopu hue or fugu
Antennariidae	frogfishes	NA
Syngnathidae	pipefishes and seahorses	NA

Scientific Name	English Common Name	Local Name
Echinoderms	sea cucumbers and sea urchins	namako, lole, wana
Mollusca	(Those species not listed as CHCRT)	NA
Azooxanthellates	ahermatypic corals	koʻa
Fungiidae	mushroom corals	koʻa
	small and large coral polyps	koʻa
	soft corals and gorgonians	NA
Actinaria	anemones	NA
Zoanthinaria	soft zoanthid corals	NA
Solanderidae	hydroid corals	NA
Stylasteridae	lace corals	koʻa
Crustaceans	lobsters, shrimps, mantis shrimps, true crabs and hermit crabs (Those species not listed as CMUS)	ula, aʻama, moʻala, ʻalakuma
Hydrozoans and Bryzoans		NA
Pinctada margaritifera	black lipped pearl oyster	NA
Other Bivalves	other clams	NA
Tunicates	sea squirts	NA
Porifera	sponges	NA
Cephalopods	octopi	tako, heʻe
Gastropoda	sea snails	NA
Opistobranchs	sea slugs	NA
Algae	seaweed	limu
Live rock		NA
Annelids	segmented worms (Those species not listed as CHCRT)	NA
All other coral reef ecosystem management unit species that are marine plants, invertebrates, and fishes that are not listed in the preceding tables or are not bottomfish management unit species, crustacean management unit species, Pacific pelagic management unit species, precious coral or seamount groundfish.		

3.1.2.10.2 Permit and Reporting Requirements

Special permits are required for any directed fisheries on potentially harvested coral reef taxa (PHCRT) or to fish for any CRE MUS with any gear not normally permitted. Those issued a Federal permit to fish for non-CRE MUS but who incidentally catch CRE MUS are exempt from the CRE permit requirement. Those fishing for currently harvested coral reef taxa (CHCRT) outside of an MPA and do not retain any incidentally-caught PHCRT, or any person collecting marine organisms for scientific research are also exempt from the CRE permit requirement. Permits are only valid for fishing in the fishery management subarea specified on the permit.

The harvest of live rock and living corals is prohibited throughout the federally managed U.S. EEZ waters of the region; however, under special permits with conditions specified by NMFS following consultation with the Council, indigenous people could be allowed to harvest live rock or coral for traditional uses, and aquaculture operations could be permitted to harvest seed stock. A Federal reporting system for all fishing under special permits is in place. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks. Resource monitoring systems administered by state, territorial, and commonwealth agencies continue to collect fishery data on the existing coral reef fisheries that do not require special permits.

Any special permit holder must contact the appropriate NMFS enforcement agent in Hawaii at least 24 hours before landing any CRE MUS harvested under a special permit, and report the port and the approximate date and time at which the catch will be landed.

3.1.2.10.3 Gear Restrictions and Prohibitions

Allowable gear types include: (1) Hand harvest; (2) spear; (3) slurp gun; (4) hand/dip net; (5) hoop net for Kona crab; (6) throw net; (7) barrier net; (8) surround/purse net that is attended at all times; (9) hook-and-line (powered and unpowered handlines, rod and reel, and trolling); (10) crab and fish traps with vessel ID number affixed; and (11) remote operating vehicles/submersibles. New fishing gears that are not included in the allowable gear list may be allowed under the special permit provision. CRE MUS may not be taken by means of poisons, explosives, or intoxicating substances. Possession and use of these materials is prohibited.

All fish and crab trap gear used by permit holders must be identified with the vessel number. Unmarked traps and unattended surround nets or bait seine nets found deployed in the CRE regulatory area will be considered unclaimed property and may be disposed of by NMFS or other authorized officers.

3.1.2.10.4 Framework Procedures for Regulatory Adjustments

A framework process, providing for an administratively simplified procedure to facilitate adjustments to management measures previously analyzed in the CRE FMP, is an important component of the FEP. These framework measures include designating “no-anchoring” zones and establishing mooring buoys, requiring vessel monitoring systems on board fishing vessels, designating areas for the sole use of indigenous peoples, and moving species from the PHCRT to the CHCRT list when sufficient data has been collected. A general fishing permit program could also be established for all U.S. EEZ coral reef ecosystem fisheries under the framework process.

The framework process can be used for either established or new measures. Established measures are management measures that, at some time, have been included in regulations implementing the FMP or FEP, and for which the impacts have been evaluated in Council/NMFS documents in the context of current conditions. Under these conditions, the Council may recommend to the NMFS Regional Administrator that established measures be modified, removed, or re-instituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

New measures are management measures that have not been included in regulations implementing the FMP or FEP, or for which the impacts have not been evaluated in Council/NMFS documents in the context of current conditions. The Council will publicize, including by a Federal Register document, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a Federal Register document summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

3.1.2.10.5 Bycatch Measures

Almost all coral reef fishes caught in Hawaii are considered food fishes and are kept, regardless of size or species. There is no specific information available on bycatch from coral reef fisheries, particularly inshore fisheries. However implementation of Federal prohibitions on the use of non-selective fishing methods including bottom trawls, bottom gillnets, explosive and poisons are intended to reduce or avoid bycatch in this fishery in EEZ waters. These restrictions further reduce the potential for bycatch in this fishery. In addition any fishing vessel (commercial or non-commercial) operating in the territorial seas or EEZ of the U.S. in a fishery identified through NMFS' annual determination process must carry an observer when directed to do so.

3.1.2.10.6 Annual Catch Limit

3.1.2.10.6.1 Specification Mechanism

For the coral reef fishery, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The specification will be done on an annual basis by NMFS based on recommendations from the Council.

3.1.2.10.6.2 Limit

For the recent Hawaii Coral Reef Annual Catch Limits, please refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.2.10.6.3 Accountability Measures

Accountability measures will be specified on an annual basis by NMFS based on recommendations by the Council. The specification of accountability measures will follow the process described in Appendix E.

3.1.2.10.7 Criteria for Determining Overfishing

MSY Control Rule and Stock Status Determination

Available biological and fishery data are poor for all coral reef ecosystem management unit species in the Mariana Islands. There is scant information on the life histories, ecosystem dynamics, fishery impact, community structure changes, yield potential, and management reference points for many coral reef ecosystem species. Additionally, total fishing effort cannot be adequately partitioned between the various management unit species (MUS) for any fishery or area. Biomass, maximum sustainable yield, and fishing mortality estimates are not available for any single MUS. Once these data are available, fishery managers can establish limits and reference points based on the multi-species coral reef ecosystem as a whole.

When possible, the MSY control rule are applied to the individual species in a multi-species stock. When this is not possible, MSY may be specified for one or more species; these values can then be used as indicators for the multi-species stock's MSY.

Individual species that are part of a multi-species complex will respond differently to an OY-determined level of fishing effort (F_{OY}). Thus, for a species complex that is fished at F_{OY}, managers still must track individual species' mortality rates in order to prevent species-specific population declines that would lead to depletion.

When possible, available data for a particular species are used to evaluate the status of individual MUS stocks in order to prevent recruitment overfishing. When better data and the appropriate multi-species stock assessment methodologies become available, all stocks will be evaluated independently, without proxy.

Establishing Reference Point Values

Standardized values of catch per unit effort (CPUE) and effort (E) are used to establish limit and reference point values, which act as proxies for relative biomass and fishing mortality, respectively. Limits and reference points are calculated in terms of $CPUE_{MSY}$ and E_{MSY} included in Table 5.

Table 5: CPUE-based Overfishing Limits and Reference Points for Coral Reef Species

Value	**Proxy**	**Explanation**
MaxFMT (F_{MSY})	E_{MSY}	0.91 $CPUE_{MSY}$
F_{OY}	0.75 E_{MSY}	suggested default scaling for target
B_{MSY}	$CPUE_{MSY}$	operational counterpart
B_{OY}	1.3 $CPUE_{MSY}$	simulation results from Mace (1994)
MinSST	0.7 $CPUE_{MSY}$	suggested default (1-M)B_{MSY} with M=0.3*

B_{FLAG}	0.91 $CPUE_{MSY}$	suggested default (1-M)B_{OY} with M=0.3*

When reliable estimates of E_{MSY} and $CPUE_{MSY}$ are not available, they are generated from the available time series of catch and effort values, standardized for all identifiable biases using the best available analytical tools. $CPUE_{MSY}$ is calculated as one-half a multi-year moving average reference CPUE ($CPUE_{REF}$).

Other Measures

There are other non-regulatory measures consistent with plan objectives that are being undertaken by the Council outside of the regulatory regime. These include a process and criteria for EFH consultations; formal plan team coordination to identify and to address coral reef ecosystem impacts from existing fisheries; a system to facilitate consistent state and territorial level management; and research and education efforts.

3.1.2.11 Regulations Implementing International Recommendations and other Applicable Laws

There are no current international recommendations or applicable laws in the coral reef fishery for the Hawaiian archipelago. However, to ensure that coral reef fisheries are adequately represented, the Council participates in meetings of the U.S. Coral Reef Task Force, established by Executive Order 13089 to protect coral reefs and coral reef ecosystems.

3.1.2.12 Bycatch

Almost all coral reef fishes caught in Hawaii are considered food fishes and are kept, regardless of size or species. There is no specific information available on bycatch from coral reef fisheries, particularly inshore fisheries. However implementation of Federal prohibitions on the use of non-selective fishing methods including bottom trawls, bottom gillnets, explosive and poisons are intended to reduce or avoid bycatch in this fishery in EEZ waters. These restrictions further reduce the potential for bycatch in this fishery. In addition any fishing vessel (commercial or non-commercial) operating in the territorial seas or EEZ of the U.S. in a fishery identified through NMFS' annual determination process must carry an observer when directed to do so.

3.1.2.13 Identification and Description of EFH and HAPC

In designating EFH for Coral Reef Ecosystem MUS, MUS are linked to specific habitat "composites" (e.g., sand, live coral, seagrass beds, mangrove, open ocean) for each life history stage, consistent with the depth of the ecosystem to 50 fathoms and to the limit of the EEZ.

Except for several of the major coral reef associated species, very little is known about the life histories, habitat utilization patterns, food habits, or spawning behavior of most coral reef associated species. For this reason, the Council, through the CRE-FMP, designated EFH using a two-tiered approach based on the division of MUS into the Currently Harvested Coral Reef Taxa (CHCRT) and Potentially Harvested Coral Reef Taxa (PHCRT) categories. This is also consistent with the use of habitat composites.

3.1.2.13.1 Description and Identification of EFH for CHCRT

In the first tier, EFH has been identified for species that (a) are currently being harvested in state and federal waters and for which some fishery information is available and (b) are likely to be targeted in the near future based on historical catch data.

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for species assemblages pursuant to 50 CFR 600.815 (a)(2)(ii)(E). The designation of these complexes is based on the ecological relationships among species and their preferred habitat. These species complexes are grouped by the known depth distributions of individual MUS. The textual EFH designations for CHCRT throughout the Western Pacific Region are found in Table 6.

3.1.2.13.2 Description and Identification of EFH for PHCRT

EFH has also been designated for the second tier, PHCRT. These taxa include literally thousands of species encompassing almost all coral reef fauna and flora. However, there is very little scientific knowledge about the life histories and habitat requirements of the thousands of species of organisms that compose these taxa. In fact, a large percentage of this biota has not been described by science. Therefore, the Council has used the precautionary approach in designating EFH for PHCRT so that enough habitat is protected to sustain managed species.

EFH for all life stages of Potentially Harvested Coral Reef Taxa is designated as the water column and bottom habitat from the shoreline to the outer boundary of the EEZ to a depth of 50 fathoms (Table 6). As with CHCRT, the Council has designated EFH for species assemblages pursuant to the federal regulations cited above.

Table 6: EFH Designations for Coral Reef Taxa.

Species Assemblage/Complex	EFH (Egg and Larvae)	EFH (Adult and Juvenile)
Acanthuridae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Balistidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Carangidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Carcharhinidae	N/A	All bottom habitat and the adjacent water column from 0 to 50 fm to the outer extent of the EEZ.
Holocentridae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky and coral areas and the adjacent water column from 0 to 50 fm.
Kuhliidae	The water column from the shoreline to the outer limits of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 25 fm.
Kyphosidae	Egg, larvae, and juvenile: the water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky and coral bottom habitat and the adjacent water column from 0 to 15 fm.
Labridae	The water column and all bottom habitat extending from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	
Mullidae	The water column extending from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky/coral and sand-bottom habitat and adjacent water column from 0 to 50 fm.
Mugilidae	The water column from the shoreline to the outer limits of the EEZ to a depth of 50 fm.	All sand and mud bottoms and the adjacent water column from 0 to 25 fm.

Species Assemblage/Complex	EFH (Egg and Larvae)	EFH (Adult and Juvenile)
Muraenidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky and coral areas and the adjacent water column from 0 to 50 fm.
Octopodidae	Larvae: The water column from the shoreline to the outer limits of the EEZ to a depth of 50 fm.	EFH for the adult, juvenile phase, and demersal eggs is defined as all coral, rocky, and sand-bottom areas from 0 to 50 fm.
Polynemidae	The water column extending from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky/coral and sand-bottom habitat and the adjacent water column from 0 to 50 fm.
Priacanthidae	The water column extending from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All rocky/coral and sand-bottom habitat and the adjacent water column from 0 to 50 fm.
Scaridae	The water column from the shoreline to the outer limit of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm
Siganidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
Scombridae	EFH for all life stages of dogtooth tuna is designated as the water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	
Sphyraenidae	EFH for all life stages in the family Sphyraenidae is designated as the water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	
Turbinidae	The water column from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	All bottom habitat and the adjacent water column from 0 to 50 fm.
All Potentially Harvested Coral Reef Taxa	EFH for all life stages of Potentially Harvested Coral Reef Taxa is designated as the water column and bottom habitat from the shoreline to the outer boundary of the EEZ to a depth of 50 fm.	

3.1.2.13.3 Identification of Habitat Areas of Particular Concern

Because of the already-noted lack of scientific data, the Council considered locations that are known to support populations of Coral Reef Ecosystem MUS and meet NMFS criteria for HAPC. Although not one of the criteria established by NMFS, the Council considered designating areas that are already protected—for example, wildlife refuges—as HAPC because such areas have been singled out for their ecological values during their designation as a protected area, and therefore would likely meet the HAPC criteria as well. The Coral Reef Ecosystem MUS HAPCs identified in Table 7 have met at least one of the four criteria listed above, or the fifth criterion just identified (i.e., protected areas). However, a great deal of life history work needs to be done in order to adequately identify the extent of HAPCs and link them to particular species or life stages. Table 7 shows Hawaiian Archipelago Coral Reef HAPCs.

Table 7: Coral Reef Ecosystem HAPC Designations in the Hawaiian Archipelago

	Rarity of Habitat	**Ecological Function**	**Susceptibility to Human Impact**	**Likelihood of Developmental Impacts**	**Existing Protective Status**
NWHI					
All substrate 0–10 fm	x	x	x		x
Laysan*:* All substrate 0–50 fm	x	x			
Midway*:* All substrate 0–50 fm	x	x	x		x
FFS*:* All substrate 0–50 fm	x	x	x	x	
Main Hawaiian Islands					
Kaula Rock (entire bank)		x	x		x
Niihau (Lehua Island)	x	x	x		
Kauai (Kaliu Point)		x	x		
Oahu					
Pupukea (MLCD)		x	x	x	x
Shark’s Cove (MLCD)			x	x	x

	Rarity of Habitat	Ecological Function	Susceptibility to Human Impact	Likelihood of Develop-mental Impacts	Existing Protective Status
Waikiki (MLCD)			x	x	x
Makapuu Head/Tide Pool Reef Area		x	x	x	
Kaneohe Bay	x	x	x	x	
Kaena Point		x	x		
Kahe Reef		x	x		
Maui					
Molokini	x	x	x	x	x
Olowalu Reef Area		x	x	x	
Honolua-Mokuleia Bay (MLCD)		x	x		x
Ahihi Kinau Natural Area Reserve	x	x	x		x
Molokai (south shore reefs)		x	x		
Lanai					
Halope Bay		x	x		
Manele Bay		x	x	x	
Five Needles		x	x		
Hawaii					
Lapakahi Bay State Park (MLCD)		x	x		x
Puako Bay and Reef (MLCD)		x	x		x
Kealakekua		x	x		x

	Rarity of Habitat	Ecological Function	Susceptibility to Human Impact	Likelihood of Develop-mental Impacts	Existing Protective Status
Waialea Bay (MLCD)	x	x	x		x
Kawaihae Harbor-Old Kona Airport (MLCD)		x	x		x
Additional Areas					
All Long-term Research Sites		x	x		
All CRAMP sites		x	x		

3.1.3 Crustacean Fishery

Hawaii's crustacean fishery is comprised primarily of lobster (ula), deepwater shrimp, and Kona crab.

3.1.3.1 Description (commercial, charter, recreational)

Lobsters

Ula was a traditional source of food for Native Hawaiians and was sometimes used in early religious ceremonies (Titcomb, 1972). After the arrival of Europeans in Hawaii, the lobster fishery became by far the most productive of Hawaii's commercial shellfish fisheries. It was reported that the MHI commercial lobster catch in 1901 was 131,200 pounds (Cobb 1902). However, by the early 1950s, the commercial catch of spiny lobsters (*P. penicillatus*) around the MHI had dropped by 75 percent to 85 percent (Shomura 1987). A statewide analysis of MHI commercial lobster catch data by Kelly and Messer (2005) found that 185,263 pounds of lobster were caught between 1984 and 2004 with annual landings ranging between 7,000 and 12,000 pounds.

Kona Crab

The MHI commercial Kona crab fishery began very small and was concentrated around the Oahu and Hawaii Island. Landings and participation increased throughout the 1950s and 1960s, and the fishery expanded to Maui Nui and Kauai around that time (Thomas, 2011). Data on the Kona recreational fishery crab is not available, but Kona crab is known to be targeted by recreational fishermen and catch may not be insubstantial (Brown, 1985 and Pooley,1993).

Deepwater Shrimp

Around Hawaii, *Heterocarpus laevigatus* and *H. ensifer* have been reported in both the MHI and the NWHI (Gooding, 1984; Dailey and Ralston, 1986; Ralston and Tagami, 1992; Moffitt and

Parrish, 1992). Submersible surveys of shrimp densities on different habitats in the MHI reported that *Heterocarpus ensifer* tended to group around large anemones and other benthic relief over an otherwise flat, sandy bottom and were very active in the presence of a baited trap (Gooding et. al., 1988; Moffitt and Parrish, 1992; Ralston and Tagami, 1992). However, *Heterocarpus laevigatus* were solitary and showed little activity around baited traps and greater densities of *Heterocarpus laevigatus* were observed on volcanic substrata rather than on coralline substrata (Moffitt and Parrish, 1992).

Trapping surveys in the MHI reported that the exploitable biomass of *H. laevigatus* was greatest at 460- 640 meters and negligible amounts occurred shallower than 350 meters or deeper than 830 meters (Ralston and Tagami, 1992). In the NWHI, the highest catch rates for *H. laevigatus* were made between 500 and 800 meters while the highest catch rates for *H. ensifer* occurred between 350 and 600 meters (Gooding, 1984). Specific information pertaining to habitat characteristics in the MHI or the NWHI is not available.

An intermittent deepwater shrimp fishery began in Hawaii 1967 (Tagami and Ralston 1988) and continues to be vary from year to year with an average of three vessels reporting the catch of deepwater shrimp to the state of Hawaii. Vessels ranged in size from 7.5 to 40 m in length, though the number of smaller vessels increased as larger vessels left the fishery (Tagami and Barrows 1988). To date, the highest landings (~275,000 lbs.) of deepwater shrimp in Hawaii occurred in 1984; however, in 1989 nearly 270,000 lbs. were landed, with an estimated ex-vessel value of more than $1 million. In 2005, vessels from the Pacific Northwest fished for Heterocarpus spp. in Hawaii and landed over 100,000 lbs. Between 1982 and 2005, the cumulative landings of H. laevigatus amounted to over 1.5 million lbs.; while during the same time period, H. ensifer landings totaled over 20,000 lbs.

3.1.3.2 Type and Quantity of Fishing Gear

In the MHI, ula fishing is done using nets and hand harvest, as lobsters do not enter traps in the MHI. The Kona crab fishery utilizes strings of baited tangle-nets set on the sea floor with an average soak time of one hour during day-trips from small boats (Thomas, 2011).

Deepwater shrimp are caught using either trawls or traps. In areas where there is a continental shelf adjacent to a land mass, trawls are more effective. However, in Pacific island areas where there are more steep slopes, baited traps are more efficient (King, 1993). Traps are primarily used in the Western Pacific Region to catch deepwater shrimp.

Traps are made from steel, wire, and/or plastic with conical entrances that allow the shrimp to get into the trap, but not out. Trap lines are marked with flags and spaced out at approximately 30 meters apart. The traps are left out overnight to fish and collected the next day (King, 1993). In Hawaii, shrimp trapping vessels have employed large pyramidal traps of about 2 m^3 in volume, setting up to 50 traps per day (Polovina, 1993).

3.1.3.3 Catch in Numbers or Weight

Catch information regarding crustaceans in state and federal waters around the MHI is limited to commercial catch data from the State of Hawaii, as there is no federal permit, nor are there any state or federal reporting requirements for recreational fishery participants.

The 2004-2014 average for crustacean catch (Figure 5) was 74,672 lbs. with a high of 156,509 lbs. (2004) and a low of 44,902 lbs. (2004). During that period, the percent of catch sold averaged approximately 40%. For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, refer to the current Archipelagic Fishery Ecosystem Report (SAFE Report).

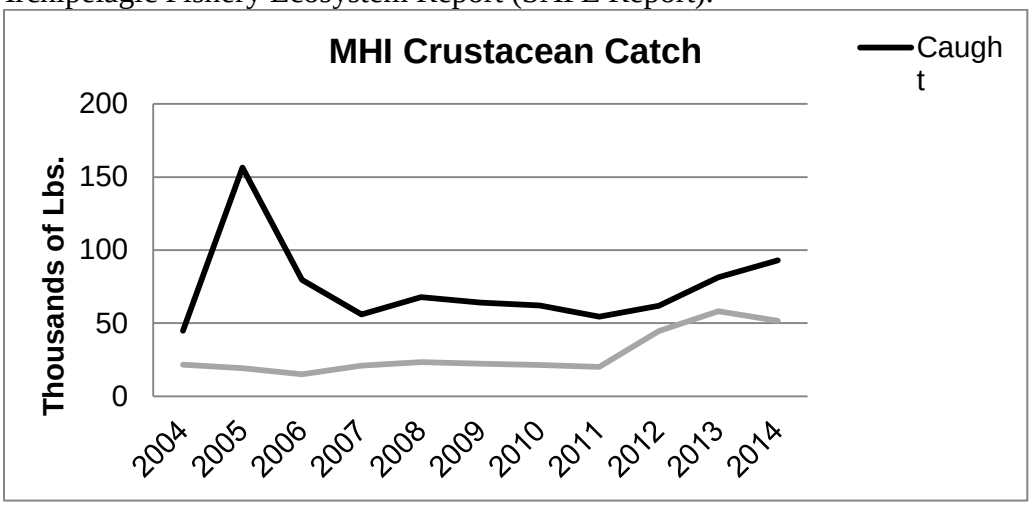

Figure 5. MHI Crustacean Catch Trend 2004-2014.

3.1.3.4 Fishing Areas

Lobsters
Lobsters in the MHI are caught by hand or by net in relatively shallow water on or near coral reefs in nearshore waters. Maui has the largest catch and effort of the commercial harvest of lobsters in the MHI, followed by Hawaii Island, Oahu and Kauai (Kelly and Messer, 2005).

Kona Crab
Penguin Bank accounts for the majority of the commercial Kona crab fishery, but landings have been reported from across the MHI (Thomas, 2011). Recreational (and commercial) fisheries may operate in any area with a sandy substrate adjacent to coral reefs in depths from 2 to 200 m (Vasant, 1978).

Deepwater Shrimp
Deepwater shrimp are generally found at depths of 200 to 1,200 meters on the outer reef slopes that surround islands and deepwater banks. Species distribution tends to be stratified by depth with some overlap. The deepwater trap fisheries have primarily targeted *Heterocarpus ensifer* and *H. laevigatus* intermittently at these locations.

3.1.3.5 Time of Fishing

Fishing for lobsters, Kona crab, and deepwater shrimp occurs year-round, during the day and at night.

3.1.3.6 Number of Hauls

For up to date information on number of crustacean hauls[8], refer to the current refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.3.7 Economics

The 2004-2014 average for direct revenue from Hawaii crustaceans was $196,774 with a high of $346,757 (2013) and a low of $98,782 (2006). The price per pound across all species averaged $7.24 for that period. For current information regarding revenue of the fishery, price per pound, total direct employment, and fisheries-dependent services or industries, please refer to the current WPFMC Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.3.8 Present and Probable Future Condition of the Fishery

The MHI Crustacean fishery has not been determined to be overfished or subject to overfishing.

3.1.3.9 Yield

3.1.3.9.1 Maximum Sustainable Yield

In the absence of more complete and accurate data, the MSY for the spiny lobster stock around the MHI can be provisionally estimated as approximately 15,000 – 30,000 lobsters per year of 8.26 cm carapace length or longer. There are insufficient data to estimate MSY values for MHI slipper lobsters or Kona crabs. MSY for deepwater shrimp is estimated for the Hawaiian Islands at 40 kg/nmi2 (Tagami and Ralston, 1988 in King, 1993).

3.1.3.9.2 Optimum Yield

For the MHI spiny lobster fishery, OY is defined as the greatest amount of non-berried spiny lobster with a carapace length of 3 1/4 in. (8.26 cm) that can be taken each year from EEZ waters around the MHI by vessels fishing in accordance with the measures in this plan. No OY estimates for MHI slipper lobsters or Kona crabs are available.

For heterocarpus in the MHI, OY has not been determined. Improved catch reports have been recommended to enhance information available to fishery managers about deepwater shrimp in the MHI and allow for improved fishery management in the future.

3.1.3.9.3 Extent to Which Fishing Vessels will Harvest and Process OY

Lobsters harvested in the Hawaiian archipelago are marketed as fresh product or as frozen lobster tails, with each vessel processing its catch at sea. In general, shrimp are considered luxury food items; therefore care in handling is practiced. Smaller vessels normally wash the shrimp and store them in iced sea-water for transportation to protect the shrimp from enzyme-induced reactions (King, 1993). Larger vessels have the space on board to process the shrimp by quick freezing them, which preserves their quality and allows them to be easily exported. Different processing

[8] Due to the nature of the fishery, deepwater shrimp information is not available due to the State of Hawaii's policy on confidential data.

methods are acceptable for different uses of deepwater shrimp. Local markets, restaurants, and hotels use whole, fresh, chilled shrimp. Shrimp tails are less likely to be used because of low meat recovery rates which are not commercially attractive (Oishi 1983).The domestic processing capacity and domestic processing levels will equal or exceed the harvest for the foreseeable future.

Domestic vessels likely have the capability to harvest the entire OY from the fishery. Therefore the TALFF appears to be zero.

3.1.3.10 MSA Conservation and Management Measures

Below are several important conservation and management measures for this fishery. Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and Appendix C. Contact the Council or the National Marine Fisheries Service Pacific Islands Regional Office for and the fishery compliance guides (www.pir.noaa.gov).

3.1.3.10.1 Management Unit Species

Table 8 provides which crustacean species are managed under the FEP and designated as Management Unit Species (MUS).

Table 8: Hawaiian Archipelago Crustaceans Management Unit Species

Scientific Name	English Common Name	Local Name
**Panulirus marginatus*	spiny lobster	ula
**Panulirus penicillatus*	spiny lobster	ula
Family Scyllaridae	slipper lobster	ula papapa
Ranina ranina	Kona crab	papaʻi kua loa
**Heterocarpus* spp.	deepwater shrimp	NA

3.1.3.10.2 Management Areas

The fishery management area for the Hawaiian Islands crustacean fisheries is divided into two Permit Areas: (1) Permit Area 1 is the EEZ around the NWHI; and (2) Permit Area 2 is the EEZ around the MHI.

3.1.3.10.3 Permit and Reporting Requirements

Each vessel used to fish for deepwater shrimp in Permit Areas 1 or 2 must have a permit issued for that vessel. The owner of any vessel used to fish for lobster in Permit Area 2 must have a permit issued for such a vessel. No vessel owner will have permits for a single vessel to harvest lobsters in Permit Areas 1 and 2 at the same time. A limited access permit is valid for fishing only in Permit Area 1.

Permits may be transferred or sold, but no one individual, partnership or corporation will be allowed to hold a whole or partial interest in more than one permit, except that an owner who qualifies initially for more than one permit may maintain those permits, but may not obtain additional permits. Layering of partnerships or corporations shall not insulate a permit holder from this requirement. If 50 percent or more of the ownership of a limited access permit is passed to persons other than those listed on the permit application, NMFS must be notified of the change in writing and provided copies of the appropriate documents confirming the changes within 30 days. Upon the transfer or sale of a limited access permit, a new application must be submitted by the new permit owner. The transferred permit is not valid until this process is completed.

The operator of any fishing vessel must maintain on board the vessel an accurate and complete record of catch, effort, and other data on report forms provided by the NMFS Regional Administrator. All information specified on the forms must be recorded on the forms within 24 hours after the completion of each fishing day. The original logbook form for each day of the fishing trip must be submitted to the Regional Administrator within 72 hours of each landing of crustacean management unit species. Each form must be signed and dated by the fishing vessel operator. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks.

The operator of any fishing vessel must submit to the Regional Administrator, within 72 hours of offloading of crustacean management unit species, an accurate and complete sales report on a form provided by the Regional Administrator. The form must be signed and dated by the fishing vessel operator.

3.1.3.10.4 Gear Restrictions and Prohibitions

Prohibitions

In Permit Area 2, it is unlawful for any person to:

(1) Fish for, take, or retain lobsters by methods other than lobster traps or by hand; or during a closed season.

(2) Retain or possess on a fishing vessel any lobster taken in Permit Area 2 that is less than the minimum size.

(3) Possess on a fishing vessel any lobster or lobster part taken in Permit Area 2 in a condition where the lobster is not whole and undamaged.

(4) Retain or possess on a fishing vessel, or remove the eggs from, any egg-bearing lobster.

(5) Possess on a fishing vessel that has a permit for Permit Area 2 any lobster trap in Permit Area 2 when fishing for lobster in the main Hawaiian Islands is prohibited during the months of May, June, July and August.

In any Permit Area, it is unlawful for any person to:

(1) Fish for, take, or retain deepwater shrimp without a permit.

(2) Falsify or fail to make, keep, maintain, or submit Federal reports and records of harvests of deepwater shrimp.

Notifications

Vessel operators must report not less than 24 hours, but not more than 36 hours, before landing, the port, the approximate date and the approximate time at which spiny and slipper lobsters will be landed. They must also report not less than six hours, and not more than twelve hours, before offloading, the location and time that offloading spiny and slipper lobsters will begin. The Regional Administrator will notify permit holders of any change in the reporting method and schedule required at least 30 days prior to the opening of the fishing season.

Size Restrictions

In Permit Area 2 only spiny lobsters with a carapace length of 8.26 cm or greater may be retained and any lobster with a punctured or mutilated body, or a separated carapace and tail, may not be retained. In addition, a female lobster of any size may not be retained if it is carrying eggs externally and eggs may not be removed from female lobsters.

Closed Seasons

In Permit Area 2 lobster fishing is prohibited during the months of May, June, July, and August.

Gear Identification and Restrictions

In Permit Area 2 lobsters may be taken only with lobster traps or by hand. Lobsters may not be taken by means of poisons, drugs, other chemicals, spears, nets, hooks, or explosives.

3.1.3.10.5 At-sea Observer Coverage

All NWHI fishing vessels must carry an observer when requested to do so by the NMFS Regional Administrator. In addition, any fishing vessel (commercial or non-commercial) operating in the territorial seas or EEZ of the U.S. in a fishery identified through NMFS' annual determination process must carry an observer when directed to do so.

3.1.3.10.6 Framework Procedures for Regulatory Adjustments

New management measures may be added through rulemaking if new information demonstrates that there are biological, social, or economic concerns in Permit Areas 1 or 2. By June 30 of each year, the Council-appointed Crustaceans Plan Team will prepare an annual report on the fisheries in the management area. The report shall contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

Established measures are management measures that, at some time, have been included in regulations implementing the FMP, and for which the impacts have been evaluated in Council/NMFS documents in the context of current conditions. Following the framework procedures of Amendment 9 to the FMP, the Council may recommend to the NMFS Regional Administrator that established measures be modified, removed, or re-instituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

New measures are management measures that have not been included in regulations implementing the FMP, or for which the impacts have not been evaluated in Council/NMFS documents in the context of current conditions. Following the framework procedures of Amendment 9 to the FMP, the Council will publicize, including by a Federal Register document,

and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a Federal Register document summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

3.1.3.10.7 Bycatch Measures

Bycatch of non-targeted species account for a small percentage of the total catch in the NWHI lobster fishery. This is due to the requirement that all lobster traps fished in the NWHI are required to be equipped with escape vents. In addition, to prevent the entrapment of juvenile monk seals, the smallest opening of an entry way ma not allow any sphere or cylinder greater than 6.5 inches in diameter to pass from outside the trap to inside the trap. Section 5.5.10 describes measures which would be taken if the lobster fishery interacted in any way with a Hawaiian monk seal. Bycatch in the MHI is also likely to be low as the most common harvest method for MHI lobsters is hand harvest; however details on gear types and bycatch are not available. No specific measures are currently needed to reduce interactions with the other protected species groups based on the absence of interactions.

3.1.3.10.8 Annual Catch Limit

3.1.3.10.9 Limit

For the recent Hawaii Crustacean Annual Catch Limits, please refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.3.10.9.1 Specification Mechanism

The Hawaii crustaceans ACL specification is governed by the control process described in Appendix E. The deepwater shrimp stocks are considered as Tier 4 stocks. Spiny lobster stock was deemed as a Tier 3 stock while slipper lobsters and Kona crabs are designated as Tier 5 stock. ACLs are specified on a multiyear level (maximum of 4 years) but NMFS shall promulgate regulations on an annual basis. Evaluations of the catches will be assessed through the annual meetings of the Fishery Ecosystem Plan Team.

3.1.3.10.9.2 Accountability Measures

There is no real-time monitoring for catches in the Hawaii crustacean fisheries. Catches are monitored through the State of Hawaii CML reporting system. The Plan Team shall review the previous year landings and if an overage occurred, an overage adjustment is applied to subsequent ACLs. Such reduction would be equivalent to the amount of overage in the previous fishing year. If the ACLs are exceeded in two consecutive years, the Council will revisit the ACL specification.

3.1.3.10.10 Criteria for Determining Overfishing

Application of National Standard 1

The MSY control rule is used as the maximum fishing mortality threshold (MFMT). The

specifications for MFMT, minimum stock size threshold (MSST), and B_{FLAG} are specified as indicated in Table 9. The MFMT is more conservative than the default recommendation in Restrepo et al. (1998), as the inflection point would be at a higher level of B (B_{MSY} rather than some level less than B_{MSY}). The MSST specification is based on the default recommendation of Restrepo et al. (1998) and is dependent on the natural mortality rate (M). The value of M to be used to determine the MSST is not specified in this document. The latest estimate, published annually in the SAFE report, is used, and the value is occasionally re-estimated using the best available information.

Table 9: Overfishing Threshold Specifications: NWHI Lobster Stocks

MFMT	**MSST**	**B_{FLAG}**
$F(B) = \frac{F_{MSY} B}{B_{MSY}}$ for $B \le B_{MSY}$ $F(B) = F_{MSY}$ for $B > B_{MSY}$	$c\ B_{MSY}$	B_{MSY}
where c = max (1-M, 0.5)		

Target Control Rule and Reference Points
While there is an established OY, it is quantified or in the form of a target control rule for lobster stocks of the Hawaiian archipelago.

Rebuilding Control Rule and Reference Points
A rebuilding control rule is specified for the NWHI lobster stocks such that for levels of B where the rebuilding control rule is applicable (i.e., between 0 and the rebuilding target, B_{MSY}), as specified in Table 10.

Table 10: Rebuilding Control Rule Specifications: NWHI Lobster Stocks

$F_{REBUILDING}$
$F(B) = 0$ for $B \le c\ B_{MSY}$ $F(B) = \frac{r\ F_{MSY} B}{B_{MSY}}$ for $c\ B_{MSY} < B \le B_{MSY}$
where c = max (1-M, 0.5) and r is the value such that fishing at $r\ F_{MSY}$ would result in a 10% chance of SPR falling to 0.20

Stock Status Determination Process
Stock status determinations involve three procedural steps. First, the appropriate MSY, target or rebuilding reference points are specified. However, because environmental changes may affect the productive capacity of the stocks, it may be necessary to modify the specifications of some of the reference points or control rules on occasion. Modifications may also be desirable when better assessment methods become available, when fishery objectives are modified (e.g., OY), or better biological, socio-economic, or ecological data become available.

Second, the values of the reference points are estimated. Third, the status of the stock is determined by estimating the current or recent values of fishing mortality and stock biomass or their proxies and comparing them with their respective reference points.

The second step (including estimation of M, on which the values of the overfishing thresholds would be dependent) and third step will be undertaken by NMFS and the latest results published annually in the Annual Archipelagic Fishery Ecosystem Report (SAFE Report). In practice, the second and third steps may be done simultaneously. In other words, the reference point values could be re-estimated as often as the stocks' status. No particular stock assessment period or schedule is specified, but in practice the assessments are likely be conducted annually in coordination with the preparation of the Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

The best information available is used to estimate the values of the reference points and to determine the status of stocks in relation to the status determination criteria. The determinations are based on the latest available stock and fishery assessments. Information used in the assessments includes logbook data, vessel observer data, and the findings of fishery-independent surveys when they are conducted.

Measures to Address Overfishing and Overfished Stocks

At present, no crustacean stocks in Hawaii have been determined to be overfished and overfishing does not appear to be a occurring. If in the future it is determined that overfishing is occurring, a stock is overfished, or either of those two conditions is being approached, the Council will establish additional management measures using the FEP amendment process or the framework adjustment process. A potential measure would be adjustments to the harvest rate. Other potential measures include additional area closures and adjustments to the NWHI seasonal closure.

The combination of control rules and reference points is illustrated in Figure 6. Note that the positions of the MSST and F_{OY} are illustrative only; their values would depend on the best estimates of M and *r* at any given time. As noted in Section 4.3.3, the NWHI lobster fishery has been closed since 2000 due to uncertainty regarding NMFS' population models, as well as the imposition of the NWHI Marine National Monument which stipulates that any commercial lobster fishing permit shall be subject to a zero annual harvest limit.

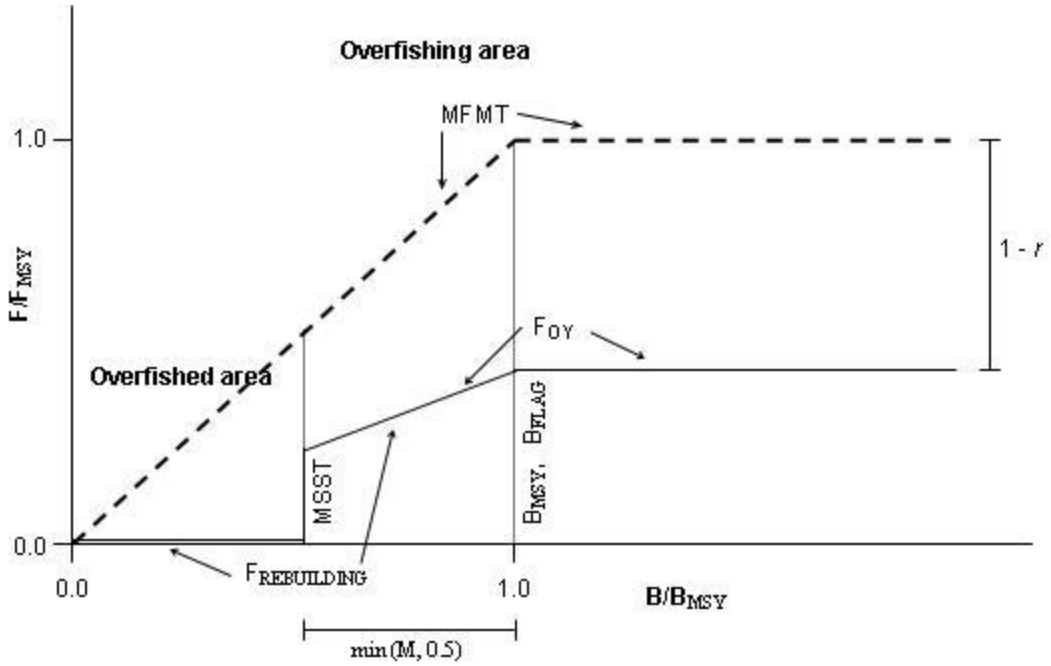

Figure 6: Combination of Control Rules and Reference Points for NWHI Lobster Stocks

3.1.3.11 Regulations Implementing International Recommendations and other Applicable Laws

There are no international recommendations or other applicable laws for the crustacean fishery in the Hawaiian Archipelago.

3.1.3.12 Bycatch

3.1.3.12.1 Amount

Lobsters are almost exclusively harvested by hand, which does not allow for bycatch. The Kona Crab fishery is a targeted fishery and will only catch Kona Crabs in their nets. Currently, there is little information about any bycatch that might be associated with the Heterocarpus fishery.

3.1.3.12.2 Type

Non-targeted species account for a small percentage of the total catch in the NWHI lobster fishery, as the traps are designed for high selectivity. Using data from 1976–1991 (wire traps) and 1986–2003 (plastic traps) from research cruises in the NWHI, Moffitt et al. (2005) examined the diversity of catch composition. The traps used for the research were more conservative than commercial traps as they did not have escape vents, but otherwise they conformed to fishery regulations. Both wire and plastic traps were found to be highly selective; that is, they primarily caught lobsters. Wire traps caught a total of 82 species over the study period, of which the two target species of lobsters accounted for 90.5 percent by number. Plastic traps caught a total of 258 species over the study period, of which 73.1 percent by number were the two target species. Because lobsters are one of the larger organisms captured, they would be a much higher percentage of the total catch if measured by weight. Of the organisms that were caught

incidentally, hermit crabs made up the largest component followed by moray eels and small reef fish.

Octopus abundance was also evaluated due to its potential as a prey species for the Hawaiian monk seal. A total of 83 individuals were captured during the entire 1986–2003 study period, and examination of the data showed no significant decline or increase in their capture rate over time. Based on the data, the study found that it is unlikely that lobster-trapping activities have lowered octopus abundance to such a degree that monk seal populations would be negatively impacted (Moffitt et al. 2005).

Overall, Moffitt et al. (2005) concluded that lobster-trapping activities are responsible for changes in abundance of a few species (target species have declined, and some crab species have increased due to competitive replacement) of the benthic community in the NWHI, but do not appear to have resulted in major changes to the ecosystem. Moffitt et al. (2005) also stated that gear lost in this fishery has not been found to be "ghost fishing" (still catching organisms), and that although direct damage to the benthic habitat by the traps has not been studied, it is not likely to be substantial due to the low-relief, hard substrate that characterizes the fishing grounds.

Currently, there is little information about bycatch associated with the Heterocarpus fishery and what is known comes primarily from research sampling.

3.1.3.12.3 Standardized Reporting Methodology

Disposition of crustaceans caught and released in the crustaceans fishery is recorded through trip reporting as required by the State CML and Federal Crustaceans permit.

3.1.3.13 Identification and Description of EFH and HAPC

Spiny lobsters are found through the Indo-Pacific region. All spiny lobsters in the Western Pacific Region belong to the family Palinuridae. The slipper lobsters belong to the closely related family, Scyllaridae. There are 13 species of the genus *Panulirus* distributed in the tropical and subtropical Pacific between 35° N and 35° S. *P. penicillatus* is the most widely distributed, the other three species are absent from the waters of many island nations of the region. Spiny lobsters are typically found on rocky substrate in well-protected areas, in crevices, and under rocks. Unlike many other species of *Panulirus*, the juveniles and adults of *P. marginatus* are not found in separate habitats apart from one another. Juvenile *P. marginatus* recruit directly to adult habitat; they do not utilize a separate shallow-water nursery habitat apart from the adults as do many Palinurid lobsters. Similarly, juvenile and adult *P. penicillatus* also share the same habitat. *P. marginatus* is found seaward of the reefs and within the lagoons and atolls of the islands. The reported depth distribution of *P. marginatus* is 3–200 meters. While this species is found down to depths of 200 meters, it usually inhabits shallower waters. *P. marginatus* is most abundant in waters of 90 meters or less. Large adult spiny lobsters are captured at depths as shallow as 3 meters.

In the southwestern Pacific, spiny lobsters are typically found in association with coral reefs. Coral reefs provide shelter as well as a diverse and abundant supply of food items. *Panulirus penicillatus* inhabits the rocky shelters in the windward surf zones of oceanic reefs and moves on to the reef flat at night to forage.

Very little is known about the planktonic phase of the phyllosoma larvae of *Panulirus marginatus*. Evidence (found in Hawaii) suggests that fine-scale oceanographic features, such as eddies and currents, serve to retain phyllosoma larvae (Polovina and Moffitt 1995).

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council has designated EFH for crustacean species assemblages. The species complex designations are spiny and slipper lobsters and Kona crab. The designation of these complexes is based on the ecological relationships among species and their preferred habitat.

At present, there are not enough data on the relative productivity of different habitats of CMUS to develop EFH designations based on Level 3 or Level 4 data. There are little data concerning growth rates, reproductive potentials, and natural mortality rates at the various life history stages. The relationship between egg production, larval settlement, and stock recruitment is also poorly understood. Although there is a paucity of data on the preferred depth distribution of phyllosoma larvae in Hawaii, the depth distribution of phyllosoma larvae of other species of *Panulirus* common in the Indo-Pacific region has been documented. Later stages of panulirid phyllosoma larvae have been found at depths between 80 and 120 meters.

3.1.3.13.1 Description and Identification of EFH for Spiny and Slipper Lobster and Kona Crab

For these reasons, the Council designated EFH for spiny and slipper lobster and Kona crab eggs and larvae as the water column from the shoreline to the outer limit of the EEZ down to a depth of 150 meters throughout the Western Pacific Region. The EFH for juvenile and adult spiny and slipper lobster and Kona crab is designated as the bottom habitat from the shoreline to a depth of 100 meters throughout the Western Pacific Region.

3.1.3.13.2 Identification of Habitat Areas of Particular Concern

Research from the Northwestern Hawaiian Islands indicates that banks with summits less than 30 meters support successful recruitment of juvenile spiny lobster while those with summit deeper than 30 meters do not. For this reason, the Council has designated all banks with summits less than 30 meters as HAPC. The basis for designating these areas as HAPC is the ecological function provided the rarity of the habitat type, and the susceptibility of these areas to human-induced environmental degradation. The complex relationship between recruitment sources and sinks of spiny lobsters is poorly understood. The Council believes that in the absence of a better understanding of these relationships, the adoption of a precautionary approach to protect and conserve habitat is warranted.

The relatively long pelagic larval phase for palinurids results in very wide dispersal of spiny lobster larvae. Panulirid larvae are transported up to 2,000 nautical miles by prevailing ocean currents. Because phyllosoma larvae are transported by the prevailing ocean currents outside of EEZ waters, the Council has identified habitat in these areas as “important habitat.” To date HAPC has not been identified or designated for deepwater shrimp.

3.1.3.14 Deepwater Shrimp Essential Fish Habitat

Adult deepwater shrimp species of the genus *Heterocarpus* have been reported throughout tropical waters of the Pacific including Hawaii (Clarke 1972, Struhsaker and Aasted; 1974, Dailey and Ralston 1986; Gooding et al. 1988; Tagami and Barrows 1988; Moffitt and Parrish 1992; Ralston and Tagami 1992; Polovina 1993), Guam (Wilder 1977), Western Samoa (King 1980), and the Northern Mariana Islands (Moffitt 1983, Ralston 1986). They are generally found in benthic deepwater habitats between 200-900 meters in depth, primarily on the steep outer reef slopes which surround the islands and deepwater banks. However, because they are found at such deep depths, accurate description and characterization of preferred habitats are difficult to obtain and virtually non-existent in the scientific literature.

The distribution of these species tends to be stratified by depth with each species occupying different but often overlapping depths (Ralston 1986). Eight species belonging to the genus *Heterocarpus* (*Heterocarpus ensifer, H. laevigatus, H. sibogae, H. gibbosus, H. lepidus, H. dorsalis, H. tricarinatus and H. longirostris*) have been reported from the Western Pacific Region, although *Heterocarpus ensifer* and *H. laevigatus* have been the primary focus of fishery operations and research surveys.

Around Hawaii, *Heterocarpus laevigatus* and *H. ensifer* have been reported in both the MHI and the NWHI (Gooding 1984; Dailey and Ralston 1986; Ralston and Tagami 1992; Moffitt and Parrish 1992). Submersible surveys of shrimp densities on different habitats in the MHI reported that *Heterocarpus ensifer* tended to group around large anemones and other benthic relief over an otherwise flat, sandy bottom and were very active in the presence of a baited trap (Gooding et. al., 1988; Moffitt and Parrish, 1992; Ralston and Tagami, 1992). However, *Heterocarpus laevigatus* were solitary and showed little activity around baited traps and greater densities of *Heterocarpus laevigatus* were observed on volcanic substrata rather than on coralline substrata (Moffitt and Parrish, 1992).

Trapping surveys in the MHI reported that the exploitable biomass of *H. laevigatus* was greatest at 460- 640 meters and negligible amounts occurred shallower than 350 meters or deeper than 830 meters (Ralston and Tagami, 1992). In the NWHI, the highest catch rates for *H. laevigatus* were made between 500 and 800 meters while the highest catch rates for *H. ensifer* occurred between 350 and 600 meters (Gooding 1984). Specific information pertaining to habitat characteristics in the MHI or the NWHI was not reported in any detail.

The species complex designation includes all eight species of deepwater shrimp extant in the Western Pacific Region (*Heterocarpus ensifer, H. laevigatus, H. sibogae, H. gibbosus, H. Lepidus, H. dorsalis, H. tricarinatus and H. longirostris*). This designation is consistent with the Code of Federal Regulations (CFR) §600.815 (a)(1)(iv)(E).

3.1.3.14.1 Description and Identification of EFH for Deepwater Shrimp

To reduce the complexity and the number of EFH identifications required for each individual species and life stages of the genus *Heterocarpus* in the Western Pacific Region, and based upon the above information, the Council has recommended EFH for the complete assemblage of adult and juvenile *Heterocarpus* spp. as the outer reef slopes between 300 and 700 meters surrounding every island and submerged banks in the Western Pacific Region.

At present, there are not enough data on the relative productivity of different habitats of *Heterocarpus* to develop EFH designations based on Level 3 (growth, reproduction and survival rates by habitat area) or Level 4 (production rates by habitat) data. In fact, there are little to no data available concerning growth rates, reproductive potentials and natural mortality rates at each life history stage.

The relationship between egg production, larval settlement and stock recruitment is also poorly understood and only available for a few specific sites (Wilder 1977; Clarke 1972; Moffitt and Polovina 1987). Mature shrimps may undergo a depth related seasonal migration in synchrony with reproduction and a shift into deeper waters from depths of about 550 meters to 700 meters. For these reasons the Council has designated EFH for *Heterocarpus* spp. eggs and larvae as the water column and outer reef slopes between 550 and 700 meters in the Western Pacific Region.

3.1.3.14.2 Identification of Habitat Areas of Particular Concern

There are no HAPC designated for deepwater shrimp in the Hawaiian Archipelago.

3.1.4 Precious Corals Fishery

3.1.4.1 Description (commercial, charter, recreational)

Collection of black coral from depths of 30–100 meters by scuba divers has continued in Hawaii since black coral beds were discovered off Lahaina, Maui, in the late 1950s, although harvest levels have fluctuated with changes in demand. Since 1980, virtually all of the black coral harvested around the Hawaiian Islands has been taken by hand from a bed located in the Auau Channel. Most of the harvest has come from State of Hawaii waters; however, a portion of the black coral bed in the Auau Channel is located in the EEZ. In 1999, concern about the potential for greater harvesting pressure on the black coral resources led the State of Hawaii to prohibit the harvest of black coral with a base diameter of less than 3/4 inches from state waters.

After two decades of minimal activity, the domestic fishery for pink, gold, and bamboo precious corals in the EEZ of Hawaii resumed in December 1999. One company used two one-man submersibles to survey and harvest pink and gold corals at depths between 400–500 meters during 1999 and 2001. However, they did not continue their operations after that time, and the actual harvests cannot be reported here because of data confidentiality policies that prohibit the publication of proprietary information unless there are at least three separate operations included in the dataset.

There is no known recreational component to this fishery.

3.1.4.2 Type and Quantity of Fishing Gear

Various fishing enterprises have used tangle net dredges (now prohibited), cameras and maneuverable tools, and one-man submersibles to harvest precious corals.

3.1.4.3 Harvest in Numbers or Weight

Recent harvest figures for black coral in Hawaii cannot be presented because there have been fewer than three harvest operations. However, between 1990 and 1997, the annual harvest of black coral averaged 3,084 lbs., with a low of 864 lbs. (1993) and a high of 6,017 lbs. (1995).

3.1.4.4 Fishing Areas

Precious corals may be caught in any part of the Hawaiian archipelago with suitable habitat. Some areas that are known to have precious corals are classified beds known as "established," "conditional," or "exploratory" depending on the amount of precious corals in the area.

3.1.4.5 Time of Fishing

Fishing for precious corals can be done day or night, but most black coral harvest is done during the day due to the use of SCUBA.

3.1.4.6 Number of Hauls

Precious coral haul numbers are not available due to the nature of the data set (confidential data with the Hawaii Division of Aquatic Resources in the case of black coral), or nonexistent (in the case of pink, gold and black coral). For the recent information on precious coral hauls, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.4.7 Economics

Recent revenue figures for black coral in Hawaii cannot be presented because there have been fewer than three harvest operations. However, between 1990 and 1997, the annual revenue in the fishery averaged $48,407, with a low of 10,394 (1997) and a high of $122,765 (1995).

3.1.4.8 Present and Probable Future Condition of the Fishery

To date, Hawaii's precious corals fishery has not been determined to be overfished or subject to overfishing.

For current information regarding the condition of, and statistics from, the precious coral fishery, refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.4.9 Yield

3.1.4.9.1 Maximum Sustainable Yield

To date, beds of pink, gold and/or bamboo corals have been found at various locations in EEZ waters around the Hawaii Archipelago. Within the EEZ, the Makapuu Established Bed has experienced the greatest level of documented exploitation and scientific research, and thus is the source of much of the available information about Hawaii's precious corals. Density of occurrence estimates for precious corals colonies in their habitat, based on in situ observations made at the Makapuu Bed, reveal a fairly dense habit of growth. This bed was surveyed in the 1970s, and again in 1997.

In 1971, densities of commercial species were determined in an unexploited section of the bed, and the size frequency distribution of pink coral was determined (Grigg 1976). The average

density of pink coral in the Makapuu Bed was 0.022 colonies per square meter. Extrapolation of this figure to the entire bed (3.6 million m2) results in a standing crop of 79,200 colonies. The 95 percent confidence limits of the standing crop are 47,200 to 111,700 colonies. Conversion of standing crop colonies to biomass produced an estimate of 43,500 kg for *C. secundum* in the Makapuu Bed.

The estimates of density for gold coral (*Gerardia* spp.) and bamboo coral (*Lepidisis olapa*) in the Makapuu Bed were 0.003 colonies/m2 and 0.01 colonies/m2 respectively. However, the distributional patterns of both of these species were found to be very patchy, much more so than *C. secundum*, and the area where they occurred was only about half that for pink coral, or 1.8 million m2. The corresponding estimates of unfished abundance for gold and bamboo colonies are 5,400 and 18,000 colonies respectively. Data for the mean weight of colonies in the populations of gold and bamboo coral in the Makapuu Bed are lacking, but rough estimates were 2.2 kg for gold coral and 0.6 kg for bamboo coral. Multiplying mean weights by densities leads to rough estimates of standing crop of about 11,800 kg for *Gerardia spp*. and 10,800 for *Lepidisis spp*. A 1997 resurvey which used a newer technology enabling deeper dives, found the Makapuu bed to be about 15 percent larger than previously estimated (Grigg 2002).

MSYs for the Makapuu Established Bed have been estimated using a Beverton and Holt cohort production model (Beverton and Holt 1957) where data are available for *Corallium secundum*, and the Gulland Model (MSY = 0.4 MBo, where M=natural mortality and Bo is virgin biomass) for *Gerardia* and *Lepidisis* (Gulland 1970). The Gulland (1969) method to estimate MSY was used for gold and bamboo corals at the Makapuu Bed, where information on population dynamics is lacking. MSY is 40 percent of the natural mortality rate times virgin stock biomass (estimated from the product of area of the bed, average colony density and weighted average weight of a virgin colony; MSY = 0.4 x M x B). The mortality rate for pink coral (M=0.066) is used as a proxy for other species.

Table 11: MSY Estimates for Precious Corals in the Makapuu Bed

Species (common name)	**MSY (kg/yr)**	**Method of calculation**
Corallium secundum (pink)	1,185	Beverton and Holt Cohort production model
Corallium secundum (pink)	1,148	Gulland model
Gerardia spp. (gold)	313	Gulland model
Lepidisis olapa (bamboo)	285	Gulland model

Harvest quotas for Hawaii's four Conditional Beds have been extrapolated, based on bed size, by comparison with that of the Makapuu Established Bed using the following formula for Conditional Beds for which detailed data are unavailable (see Table 12).

$$\frac{\text{MSY for Makapuu Bed}}{\text{Area of Makapuu Bed}} = \frac{\text{MSY for Conditional Bed}}{\text{Area of Conditional Bed}}$$

As discussed below, the harvest quotas represent OY values and are based on extrapolations from "rounded down MSY values" for the Makapuu Bed.
Commercial harvests of black coral have occurred in waters around Hawaii for more than three decades. Significant harvests have been made from the Auau Channel and around Kauai. In 1976, Grigg estimated black coral MSYs of 6,174 kg/yr for the Auau Channel and 1,480 kg/year for the area around Kauai using a Beverton and Holt yield production model (Grigg 1976). More recently, Grigg discovered a greater impact to the black coral resource from an invasive soft coral, *Carijoa riisei*, and based on that, coupled with harvesting impacts, estimated a reduced MSY of 3,750 kg/yr (Grigg 2004) for this area.

No MSY estimates are available for the Exploratory Areas; however harvest quotas have been implemented based on available information (see below).

3.1.4.9.2 Optimimum Yield

As discussed above, OY values for the six Established and Conditional beds are based on MSY estimates for the Makapuu Bed, which were rounded downward for ecological reasons. The rounded down MSY values were then extrapolated to the Conditional Beds based on relative bed size. The OY for the Makapuu Bed is expressed as a two-year harvest quota because it is economically disadvantageous to utilize the expensive specialized equipment required for selective harvesting of precious coral for only part of each year on only one coral bed. The more flexible biannual schedule makes it easier for harvesters to deploy in other areas once the two-year Makapuu Bed quota is taken.

The OY values are used as the harvest quotas for all species except black coral (Table 12). The harvest quota for the Hawaii Exploratory Area comprises 1,000 kg/year of all species of precious corals combined (except black coral). This harvest quota was set when non-selective gear was allowed to be used and today is considered to be conservative as selective gear has very low bycatch rates and does not damage nearby colonies during the harvesting process.

Table 12: OY values (Harvest Quotas) for Hawaii Precious Corals

Type of coral bed	Name of coral bed	Harvest quota in kilograms	Number of years
Established Beds	Auau Channel	Black: 5,000	2
	Makapu'u	Pink: 2,000 Gold: 0 (zero) Bamboo: 500	2 -- 2
Conditional Beds	180 Fathom Bank	Pink: 222 Gold: 67 Bamboo: 56	1 1 1
	Brooks Bank	Pink: 17 Gold: 133 Bamboo: 111	1 1 1
	Kaena Point	Pink: 67 Gold: 20 Bamboo: 17	1 1 1

	Keahole Point	Pink: 67 Gold: 20 Bamboo: 17	1 1 1
Refugia	Westpac	All: 0 (zero)	--
Exploratory Areas	Hawaii, American Samoa, Guam, CNMI, U.S. Pacific Remote Island Areas	1,000 per area (all species combined except black corals)	1

Notes:
1. The final rule implementing the FMP lists the harvest quota for pink coral at Brooks Bank as 17 kg. This is a typographical error; the correct harvest quota is 444 kg.
2. No fishing for coral is authorized in refugia.
3. A moratorium on gold coral harvesting is in effect through June 30, 2018.

3.1.4.9.3 Extent to Which Fishing Vessels will Harvest OY

Based on available information, domestic vessels can harvest the Precious Coral OY from the Established and Conditional Beds. Therefore the TALFF for these beds appears to be zero. The TALFF for each Exploratory Area shall be its quota minus two times of the amount harvested by domestic vessels between July 1 and December 31 of the preceding year. The TALFF may be made available for foreign fishing under a scientific research plan approved by NMFS in consultation with the Council and State agencies.

3.1.4.9.4 Extent to Which U.S. Fish Processors will Process OY

There is sufficient domestic processing capacity to accommodate increased harvests. The U.S. imports semi-processed coral for finishing into jewelry. Under the FEP, domestic production could replace these imports. It is anticipated that domestic processing capacity and domestic processing levels will equal or exceed the domestic harvest for the foreseeable future.

3.1.4.10 MSA Conservation and Management Measures

Below are several important conservation and management measures for this fishery. Federal regulations governing this fishery can be found in the Code of Federal Regulations, Title 50, Part 665, Subpart G and Appendix C. Contact the Council or the National Marine Fisheries Service Pacific Islands Regional Office for and the fishery compliance guides (www.pir.noaa.gov).

3.1.4.10.1 Management Unit Species

Table 13 provides which precious coral species are managed under the FEP and designated as Management Unit Species (MUS).

Table 13: Hawaiian Archipelago Precious Corals Management Unit Species

Scientific Name	English Common Name	Local Name
Corallium secundum	pink coral (also called red coral)	NA
Corallium regale	pink coral (also called red coral)	NA

Corallium laauense	pink coral (also called red coral)	NA
Gerardia spp.	gold coral	NA
Narella spp.	gold coral	NA
Lepidisis olapa	bamboo coral	NA
Antipathes dichotoma	black coral	NA
Antipathes grandis	black coral	NA
Antipathes ulex	black coral	NA

3.1.4.10.2 Management Areas

The MHI precious coral fishery is designated by management areas that include established beds, conditional beds, and an exploratory area. The Makapuʻu and ʻAuʻau Channel Beds are the only two established precious coral beds in the Hawaiian archipelago. Conditional beds in the MHI include Keahole Pint (Hawaii Island) and Kaena Point (Oahu). All remaining areas are included as exploratory areas.

3.1.4.10.3 Permit and Reporting Requirements

Any vessel of the United States fishing for, taking or retaining precious corals in any precious corals permit area must have a permit. Each permit will be valid for fishing only in the permit area. No more than one permit will be valid for any one person at any one time. The holder of a valid permit to fish one permit area may obtain a permit to fish another permit area only upon surrendering to the NMFS Regional Administrator any current permit for the precious corals fishery.

The operator of any fishing vessel must maintain on board the vessel an accurate and complete record of catch, effort, and other data on report forms provided by the NMFS Regional Administrator. All information specified on the forms must be recorded on the forms within 24 hours after the completion of each fishing day. The original logbook form for each day of the fishing trip must be submitted to the Regional Administrator within 72 hours of each landing of precious corals management unit species. Each form must be signed and dated by the fishing vessel operator. Fishery participants have the option of using NMFS approved electronic logbooks in lieu of paper logbooks.

3.1.4.10.4 Gear Restrictions and Prohibitions

Only selective gear may be used to harvest coral from any precious corals permit area. Selective gear means any gear used for harvesting corals that can discriminate or differentiate between type, size, quality, or characteristics of living or dead corals.

Size Restrictions

The height of a live coral specimen shall be determined by a straight line measurement taken from its base to its most distal extremity. The stem diameter of a living coral specimen shall be determined by measuring the greatest diameter of the stem at a point no less than one inch (2.54 cm) from the top surface of the living holdfast. Live pink coral harvested from any precious corals permit area must have attained a minimum height of 10 inches (25.4 cm). Live black coral harvested from any precious corals permit area must have attained either a minimum stem diameter of 1 inch (2.54 cm), or a minimum height of 48 inches (122 cm).

Seasons and Quotas

The fishing year for precious corals begins on July 1 and ends on June 30 the following year, except at the Makapuu and Auau Channel Beds, which have a two-year fishing period that begins July 1 and ends June 30, two years later. Precious coral permit areas are the areas encompassing the precious coral beds in a management area. Each bed is designated by a permit area code and assigned to one of the following four categories: Established, Conditional, Exploratory or Refugium.

Closures

If the NMFS Regional Administrator determines that the harvest quota for any coral bed will be reached prior to the end of the fishing year, or the end of the 2-year fishing period at Makapuu Bed or Auau Channel Bed, NMFS will issue a Federal Register notice closing the bed and the public will be informed through appropriate news media. Any such field order must indicate the reason for the closure, delineate the bed being closed, and identify the effective date of the closure. A closure is also effective for a permit holder upon the permit holder's actual harvest of the applicable quota.

3.1.4.10.5 Framework Procedures for Regulatory Adjustments

Established management measures may be revised and new management measures may be established and/or revised through rulemaking if new information demonstrates that there are biological, social, or economic concerns in a precious corals permit area. By June 30 of each year, the Council-appointed Precious Corals Plan Team will prepare an annual report on the fishery in the management area. The report will contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s). Established measures are management measures that, at some time, have been included in regulations implementing the FMP, and for which the impacts have been evaluated in Council/NMFS documents in the context of current conditions. According to the framework procedures of Amendment 3 to the FMP, the Council may recommend to the Regional Administrator that established measures be modified, removed, or re-instituted. Such recommendation will include supporting rationale and analysis and will be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

New measures are management measures that have not been included in regulations implementing the FMP, or for which the impacts have not been evaluated in Council/NMFS documents in the context of current conditions. Following the framework procedures of Amendment 3 to the FMP, the Council will publicize, including by a Federal Register document, and solicit public comment on, any proposed new management measure. After a Council

meeting at which the measure is discussed, the Council will consider recommendations and prepare a Federal Register document summarizing the Council's deliberations, rationale, and analysis for the preferred action and the time and place for any subsequent Council meeting(s) to consider the new measure. At a subsequent public meeting, the Council will consider public comments and other information received before making a recommendation to the Regional Administrator about any new measure. If approved by the Regional Administrator, NMFS may implement the Council's recommendation by rulemaking.

3.1.4.10.6 Bycatch Measures

A variety of invertebrates and fish are known to utilize the same habitat as precious corals. Such organisms include *onaga* (*Etelis coruscans*), *kahala* (*Seriola dumerallii*), and the shrimp (*Heterocarpus ensifer)*, however, there is no evidence that these species or others significantly depend on precious coral beds for shelter or food. Given the highly selective nature of this fishery, and the absence of reported or expected protected species interactions, no specific measures to reduce protected species interactions are considered necessary at this time. In addition any vessel (commercial or non-commercial) operating in the territorial seas or EEZ of the U.S. in a fishery identified through NMFS' annual determination process must carry an observer when directed to do so.

3.1.4.10.7 Annual Catch Limit

3.1.4.10.7.1 Specification Mechanism

For the precious coral fishery, specification of the acceptable biological catch and annual catch limits are required by the MSA and follows the mechanism described in Appendix E. The ACL is specified on an annual basis by NMFS based on recommendations from the Council.

3.1.4.10.7.2 Limit

For the recent Hawaii Precious Coral Annual Catch Limits, please refer to the current Annual Archipelagic Fishery Ecosystem Report (SAFE Report).

3.1.4.10.7.3Accountability Measures

Accountability measures are specified on an annual basis by NMFS based on recommendations by the Council. There is no real time monitoring of catches in the Hawaii precious coral fisheries. Catches are monitored through the State of Hawaii CML reporting system. The specification of accountability measures will follow the process described in Appendix E.

3.1.4.10.8 Criteria for Determining Overfishing

Application of National Standard 1

MSY Control Rule

Pink, gold and bamboo corals occur in all six known beds, although only the "Established" Makapuu Bed has been quantitatively surveyed. While it is believed that harvestable quantities of precious corals may exist in other areas of the Western Pacific Region, no information exists on their distribution, abundance or status.

The definition of overfished for all species of precious corals is when the total spawning biomass is less than or equal to 20 percent of its unfished condition (SPR≤20 percent), based on cohort

analysis of the pink coral, *Corallium secundum*. This definition takes into account the mean survivorship, yield, age at maturity, reproductive potential and MSY of the coral populations. It also protects 20 percent of the spawning stock biomass. For beds other than the "Established" Makapuu bed more information is needed before the overfishing definition can be applied.

If recruitment is constant or independent of stock size, then MSY can be determined from controlling the fishing mortality rate (F) to maximize the yield per recruit (MYPR), i.e., MSY = MYPR(g/recruit) x R(recruits/yr)). MYPR is a function of area of the bed, average colony density and natural mortality. If a stock-recruitment relationship exists, recruitment is reduced as a function of reduced stock size, and MSY will also be reduced. The assumption of constant recruitment appears to be reasonable based on the robust recovery and verification of annual growth rings from a recent resurvey (Grigg 1976).

Alternatively, the Gulland (1969) method to estimate MSY is especially useful for gold and bamboo coral, where information on population dynamics is lacking. MSY is 40 percent of the natural mortality rate times virgin stock biomass (estimated from the product of area of the bed, average colony density and weighted average weight of a virgin colony; MSY = 0.4 x M x B). The mortality rate for pink coral (M=0.066) is used as a proxy for other species. Values for species with sufficient information to estimate MSY are summarized in Table 14 below.

Table 14: Estimates of MSY of Precious Corals in the Makapuu Bed

Species (common name)	MSY (kg/yr)	MSY (rounded)	Method of calculation
Corallium secundum (pink)	1,185	1,000	Beverton and Holt Cohort production model
Corallium secundum (pink)	1,148	1,000	Gulland model
Gerardia spp. (gold)	313	300	Gulland model
Lepidisis olapa (bamboo)	285	250	Gulland model

Harvest quotas for Hawaii's four Conditional Beds have been extrapolated (see Table 15), based on bed size as compared to that of the Makapuu Bed. The harvest quotas represent OY values and are based on extrapolations from the rounded down MSY values for the Makapuu Bed.

MSY has also been estimated to correspond to a 30 percent SPR level to maintain 30 percent of the spawning stock biomass. The Council currently manages at the MSY level. From the mid-1960s to late 1970s, annual landings from the Makapuu bed averaged 685 kg (below the MSY of 1,000 kg). No known harvesting of precious corals has occurred in the U.S. EEZ for the past 20 years. The 1997 resurvey found that pink coral in the Makapuu bed has recovered to 74-90 percent of its pristine biomass, while recruitment of gold coral is low.

Table 15: Precious Coral Harvest Quotas

Type of coral bed	Name of coral bed	Harvest quota in kilograms	Number of years
Established Beds	Auau Channel	Black: 5,000	2

	Makapuu	Pink: 2,000 Gold: 0 (zero) Bamboo: 500	2 -- 2
Conditional Beds	180 Fathom Bank	Pink: 222 Gold: 67 Bamboo: 56	1 1 1
	Brooks Bank	Pink: 17 Gold: 133 Bamboo: 111	1 1 1
	Kaena Point	Pink: 67 Gold: 20 Bamboo: 17	1 1 1
	Keahole Point	Pink: 67 Gold: 20 Bamboo: 17	1 1 1
Refugia	Westpac	All: 0 (zero)	--
Exploratory Areas	Hawaii, American Samoa, Guam, CNMI, U.S. Pacific Remote Island Areas	1,000 per area (all species combined except black corals)	1

Notes:
1. The final rule implementing the FMP lists the harvest quota for pink coral at Brooks Bank as 17 kg. This is a typographical error; the correct harvest quota is 444 kg.
2. No fishing for coral is authorized in refugia.
3. A moratorium on gold coral harvesting is in effect through June 30, 2013.

Measures to Address Overfishing and Overfished Stocks

At present no stocks of precious corals have been determined to be overfished and overfishing does not appear to be occurring. The provisions of the Precious Corals FMP, including minimum sizes and harvest quotas, are sufficient to prevent overfishing and these measures are carried over into this FEP. Precious coral beds are classified as Established (with fairly accurate estimated harvest levels), Conditional (with extrapolated MSY estimates) and Refugia (reproductive reserves or baseline areas). Exploratory Areas are all other EEZ waters and are available for harvesting with an Exploratory Permit, subject to the above quotas.

3.1.4.11 Regulations Implementing International Recommendations and other Applicable Laws

As a signatory to the Convention on International Trade in Endangered Species (CITES), the United States is required to abide by regulations include in this international agreement. CITES includes regulations on international trade of endangered species through import and export permits. Currently, Black Coral is listed as an Appendix II species, which requires an export

permit for international commercial trade. Corallium (Red/Pink corals) continues to be proposed as an Appendix II species and may end up on the list in the near future.

3.1.4.12 Bycatch

Allowable harvest gear are selective (i.e., with submersibles or by hand), and so federal precious coral fisheries in Hawaii have no bycatch associated with them.

3.1.4.12.1 Standardized Reporting Methodology

Disposition of precious corals caught and released in the precious coral fishery is recorded through trip reporting as required by the State CML and Federal Precious Corals permit.

3.1.4.13 Precious Corals Essential Fish Habitat

In the Hawaiian Islands, precious coral beds have been found only in the deep interisland channels and off promontories at depths between 300 and 1,500 meters and 30 and 100 meters. There are currently eight known beds of pink, gold, and bamboo corals including Keahole Point, Makapuʻu, Kaʻena Point, Wespac, Brooks Bank, and 180 Fathom Bank; and two recently discovered beds, one near French Frigate Shoals in the NWHI, and a second on Cross Seamount, approximately 150 nm south of Oahu. The approximate areas of six of these eight beds have been determined. These beds are small; only two of them have an area greater than 1 km2, and the largest is 3.6 km2 in size. The Keahole Bed off Hawaii's Kona coast, however, is substantially larger than originally thought. Scientists and industry are currently assessing its actual size. Initial calculations appear to increase its size twenty-fold. There are also three known major black coral beds in the Western Pacific Region, in addition to several minor beds (Grigg 1998). Most of these are located in Hawaii's state waters (0-3 nm). However the largest (the Auau Channel Bed) extends into federal waters.

Makapuu is the only bed that has been surveyed accurately enough to estimate MSY. The Wespac bed, located between Necker and Nihoa Islands in the NWHI, has been set aside for use in baseline studies and as a possible reproductive reserve. The harvesting of precious corals is prohibited in this area. Within the Western Pacific Region, the only directed fishery for precious corals has occurred in the Hawaiian Islands. At present, there is no commercial harvesting of precious corals in the EEZ, but several firms have expressed interest.

Precious corals may be divided into deep- and shallow-water species. Deep-water precious corals are generally found between 350 and 1,500 meters and include pink coral (*Corallium secundum*), gold coral (*Gerardia* spp. and *Parazoanthus* spp.), and bamboo coral (*Lepidisis olapa*). Shallow-water species occur between 30 and 100 meters and consist primarily of three species of black coral: *Antipathes dichotoma*, *Antipathes grandis*, and *Antipathes ulex*. In Hawaii, *Antipathes dichotoma* accounts for around 90 percent of the commercial harvest of black coral, and virtually all of it is harvested in state waters.

Precious corals are non–reef building and inhabit depth zones below the euphotic zone. They are found on solid substrate in areas that are swept relatively clean by moderate-to-strong (> 25 cm/sec) bottom currents. Strong currents help prevent the accumulation of sediments, which would smother young coral colonies and prevent settlement of new larvae. Precious coral yields

tend to be higher in areas of shell sandstone, limestone, and basaltic or metamorphic rock with a limestone veneer.

Black corals are most frequently found under vertical drop-offs. Such features are common off Kauai and Maui in the MHI, suggesting that their abundance is related to suitable habitat (Grigg 1976). Off Oahu, many submarine terraces that otherwise would be suitable habitat for black corals are covered with sediments. In the MHI, the lower depth range of *Antipathes dichotoma* and *A. grandis* coincides with the top of the thermocline (ca. 100 m; Grigg 1993).

Pink, bamboo, and gold corals all have planktonic larval stages and sessile adult stages. Larvae settle on solid substrate where they form colonial branching colonies. The length of the larval stage of all species of precious corals is unknown. Like other cnidarians, black corals have life cycles that include both asexual and sexual reproduction. Asexual reproduction (budding) builds the colony by adding more living tissue that, in turn, secretes more skeleton. Regular growth rings laid down as the skeleton thickens can be used to estimate the age of the colony. Sexual reproduction involves the production of eggs and sperm to create young that can disperse and settle new areas. Polyps are either male or female, but a single colony may be hermaphroditic, with both male and female polyps. The larval stage, called a planula, can drift with currents until a suitable surface is found. Once the larva settles, it metamorphoses into a polyp form and secretes skeletal material that attaches it to the seafloor. Then it begins budding, creating more polyps that will form a young colony. Asexual reproduction can also occur naturally by fragmentation of branch ends. In one Hawaiian species that have been studied (*A. dichotoma*), the colony may grow about 2.5 inches (6.4 cm) per year. Reproductive maturity may be reached after 10 to 12 years and reproduction may occur annually. A large six-foot (1.8 m) tall coral tree is estimated to be between 30 and 40 years old; a colony life span may be 70 years. Some species may live even longer.

On Hawaii's deep reef slopes and throughout the world, black corals host unique communities of marine life. Their tree-like colonies create habitat for crustaceans, bivalves, and fish. Each coral may host a different combination of species. Some residents are commensals --dependent partners that live only on the black coral. Many species in this deep reef community are new to science. The habitat sustaining precious corals is generally believed to be in good condition. However, an alien species called snowflake coral, *Carijoa riisei*, has recently begun smothering native deep reef sea life including precious corals. In 2001 deepwater surveys in the Auau Channel found a maximum impact between 70-110 m where more than 50 percent of black corals had snowflake coral overgrowth (Kahng and Grigg 2005). A second survey in 2006 reexamined conditions in the Auau Channel and found that the impact of snowflake corals had not worsened and it was possible that conditions in some areas had stabilized or improved. This led researchers to conclude that the ecological impact of snowflake coral on black corals may have stabilized or possibly abated slightly (Kahng 2007).

To reduce the complexity and the number of EFH identifications required for individual species and life stages, the Council designated EFH for precious coral assemblages. The species complex designations are deep- and shallow-water complexes. The designation of these complexes is based on the ecological relationships among the individual species and their preferred habitat.

3.1.4.13.1 Description and Identification of EFH

The Council considered using the known depth range of individual PCMUS to designate EFH, but rejected this alternative because of the rarity of the occurrence of suitable habitat conditions. Instead, the Council designated the six known beds of precious corals as EFH. The Council believes that the narrow EFH designation will facilitate the consultation process. In addition, the Council designated three black coral beds in the MHI—between Milolii and South Point on Hawaii, Auau Channel between Maui and Lanai, and the southern border of Kauai—as EFH.

3.1.4.13.2 Identification of Habitat Areas of Particular Concern

The Council designated three of the six precious coral beds—Makapuu, Wespac and Brooks Bank—as habitat areas of particular concern. Makapuu bed was designated as HAPC because of the ecological function it provides, the rarity of the habitat type, and its sensitivity to human-induced environmental degradation. The potential commercial importance and the amount of scientific information that has been collected on Makapuu bed were also considered. Wespac bed was designated as HAPC because of the ecological function it provides and the rarity of the habitat type. Its refugia status was also considered. Brooks Bank was designated HAPC because of the ecological function it provides and the rarity of the habitat type. Its possible importance as foraging habitat for the Hawaiian monk seal was also considered. For black corals, the Council designated the Auau Channel as HAPC because of the ecological function it provides, the rarity of the habitat type and its sensitivity to human-induced environmental degradation. Its commercial importance was also considered.

3.2 Northwestern Hawaiian Islands Fisheries

Archaeological evidence indicates that the Northwestern islands in the Hawaiian Archipelago were settled as far back as 1000 AD, and evidence of fishing has been found. Throughout this period, up until the 20th Century, the NWHI was a well-utilized fishing area, from the Native Hawaiians to western sailing ships, and later directed fishing operations for pearl oysters, coral reef fish, bottomfish and crustaceans. Large commercial fishing in the NWHI didn't occur until after World War II, including foreign fishing from Japan and the Soviet Union, until the passing of the FCMA in 1976. More recently, the issuance of Executive Orders 13178 and 13196 and the subsequent Presidential Proclamations 8031 and 8112 have closed the fisheries within 50 nm around the NWHI. The following sections provide a description of the NWHI fisheries that have or have been known to occur.

3.2.1 NWHI Bottomfish Fishery

For management purposes, the NWHI fishery was separated into sub-management zones in 1989, the closer open-access Mau Zone between 165° W and 161°20' W, and the more northwestern limited entry Hoʻomalu Zone to the west of 165° W. The entire NWHI bottomfish fishery occurred within Federal waters as fishing was prohibited in State waters. All vessels were required to carry active vessel monitoring systems. The NWHI bottomfish fishery closed in June 2011, in accordance with the provisions of the Papahānaumokuākea Marine National Monument, which was established in the NWHI through Presidential Proclamation No. 8031 on June 15, 2006. Bottomfish fishing in the NWHI was conducted solely by commercial fishermen, and the vessels used tend to be larger than those fishing around the MHI, as the distance to fishing grounds is greater. Participation in the NWHI bottomfish fishery was controlled through limited access programs in each of the two management zones (Hoʻomalu zone in 1989 and Mau zone in

1999). These zones were established to reduce the risk of biological overfishing and to improve the economic health and stability of the bottomfish fishery in the NWHI. The NWHI fishery provided nearly half of the bottomfish sold in the market in Hawaii annually. The programs provided for a limited number of federal fishing permits to be issued each calendar year. Permits could not be sold, leased, or chartered. Based on the biological, economic, and social characteristics of the bottomfish fisheries in the two zones, the long-term target fleet sizes for the Hoʻomalu and Mau Zones was determined to be seven and ten vessels, respectively. Through attrition and the inability to re-issue lapsed permits, on four vessels fished in the Hoʻomalu Zone, and four fished in the Mau Zone in 2006. All of these vessels were independent, owner-operated fishing operations.

Figure 4 provides the Council's zones for bottomfish fishing, noting the split of the NWHI into the Mau and Hoʻomalu Zones. The figure also includes restricted fishing areas in both the NWHI and MHI due to various regulations including the Papahānaumokuākea Marine National Monument.

Federal permits are required for any vessel fishing for bottomfish MUS in the NWHI Subarea and the permit must be registered for use with the vessel, outside of the Monument boundaries. Also, to reduce the number and impact of potential protected species interactions in the NWHI bottomfish fishery, primary and relief operators (captains) in the NWHI limited access program are required to complete a one-time protected species workshop. For more on bottomfish fishing regulations in the NWHI, see Appendix C.

Seamount Groundfish in the NWHI

The seamount bottom trawl fishery for armorhead was initiated by trawlers of the former Soviet Union in November 1967; the Japan trawl fleet entered this fishery in 1969. This fishery initially focused on the northern large tablemount seamounts (Koko, Yuryaku, N. Kammu, and S. Kammu) of the southern Emperor Seamount chain. The fishery soon expanded southward to encompass the much smaller northern Hawaiian Ridge guyot type seamounts including Colahan, C-H, and the Hancock Seamounts. By the end of 1975, the combined catches of the former Soviet and Japan trawl fleet had reached some 1 million mt of armorhead harvested from the SE-NHR seamounts. The majority of this catch was harvested from the Milwaukee Seamount Group (Yuryaku and Kammu Seamounts). However, with the steady decline in trawl CPUE after the 1972 peak, the former Soviet Union fleet left the fishery after 1975. The Japan trawl fleet continues to harvest armorhead on the seamounts outside the U.S. EEZ. Current and historic catch and effort data has relied on the commercial data of the Japan trawl fleet; useful data from the former Soviet trawl fleet remains unavailable. From the inception of this fishery to the present, U.S. fishermen have never participated in the seamount amorhead trawl fishery.

The inclusion in 1977 of the southernmost seamounts of the SE-NHR (i.e., Northwest and Southeast Hancock Seamounts) into the U.S. EEZ allowed for a small portion (> 5%) of the historic fishing grounds to be managed in a limited way. A Preliminary Management Plan was developed that year which provided for limited foreign harvesting at the Hancock Seamounts under a permit system during 1978-1984. Japan trawlers were the only vessels to apply for such permits and were subject to a combined annual harvest quota of 1,000 mt and required to carry a U.S. fishery observer aboard each permitted vessel. By the end of 1984, armorhead trawl catches

remained low with harvest quotas never attained in any of the years during 1978-1984. Subsequently, under the bottomfish and seamount groundfish FMP, a 6-year fishing moratorium was imposed on the Hancock Seamounts in 1986. Beginning in 1985, the National Marine Fisheries Service Honolulu Laboratory began a series of stock assessment cruises to the Hancock Seamounts to monitor and assess armorhead abundance. These research cruises focused on Southeast (SE) Hancock Seamount and were conducted using bottom longline gear as opposed to trawl operations. This was necessary due to our limited trawl capabilities and the advantage that bottom longline gear offered in extending the sampling over irregular terrain that allowed the entire population to be sampled. The last assessment cruise was conducted in 1993; a total of 12 assessment cruises were conducted.

Since 1975, CPUE values have remained depressed which necessitated a moratorium on fishing for armorhead at the Hancock seamount. The fishing moratorium at the Hancock Seamounts remains the only management attempt thus far to enhance the depressed stock levels of armorhead throughout the SE-NHR seamounts and if anything may prove helpful as a "good faith attempt" by our government in any future management discussions with Japan and other participating nations.

3.2.2 NWHI Coral Reef Fishery

The original establishment of the Coral Reef Ecosystem Fishery Management Plan included regulations for no-take Marine Protected Areas in the NWHI. However, due to the establishment of the Papahānaumokuākea Marine National Monument in 2006, there are no active coral reef fisheries in the NWHI.

3.2.3 NWHI Crustaceans Fishery

The NWHI Crustaceans fishery changed over the years in terms of target species and product Participants in the NWHI lobster fishery used plastic dome-shaped, single-chambered traps with two entrance funnels located on opposite sides. By regulation, all traps must have escape vents to allow unwanted organisms to exit. The traps are typically fished in strings of several hundred that are set before sunset in depths from 20 to 70 meters, and retrieved the next day. Both spiny and slipper lobsters may be caught in the same trap, but fishermen can affect the proportion of each species by selecting the trapping area and depth (Polovina 1993).

In the early years of the fishery (1977-1984) landings consisted mainly of spiny lobsters. However, for a three-year period from 1985 to 1987 the fishery targeted a previously lightly exploited population of slipper lobsters (Polovina 1993). In the mid-1980s, the NWHI lobster fishery was Hawaii's most lucrative fishery (Pooley 1993). Between 1988 and 1997 the target was again spiny lobsters, but the catch in 1998 and 1999 consisted mainly of slipper lobsters. Almost all lobsters harvested from the NWHI were sold as a frozen tails; however, from 1996 to 1998, the fleet also landed a significant quantity of live lobsters.

In 1990 NWHI lobster catch rates fell dramatically, although overfishing is not thought to be responsible for the decline (Polovina and Mitchum 1992). Rather, the decrease was found to be likely due to a climate-induced change in oceanic productivity (Polovina et al. 1994).
The proportion of fishing effort and reported catch at each bank within the NWHI varied both spatially and temporally. While as many as 16 banks within the NWHI were fished on an annual

basis, the majority of fishing effort was been directed at Maro Reef, Gardner Pinnacles, St. Rogatien, and Necker Island. The NWHI lobster fishery was closed in 2000 because of growing uncertainty in the population models used to assess stock status (DeMartini et al 2003).

The NWHI was historically dominated by spiny lobster (*Panulirus marginatus*) with a lower density of slipper lobster (*Scyllarides squammosus*). An oceanic regime shift may have caused a switch in the species dominance in the early 1990s, but the commercial fishery, combined with the spatial structure of the lobster populations and larval transport, may have played a large role in this switch as well (DiNardo 2004).

In 2001, Executive Orders 13178 and 13196 declared the NWHI a Coral Reef Ecosystem Reserve and essentially ended commercial harvest of lobsters in the NWHI. Subsequent to those EO, a Presidential Proclamation in 2006 established the Papahānaumokuākea Marine National Monument which prohibited all crustacean fishing within 50 miles of the NWHI. The designation of the Monument essentially closed the NWHI fishery as under the monument's regulations the annual harvest guideline was set at 0 lbs. until 2011, at which point commercial fishing was prohibited in the Monument.

While the Monument did close waters within 50 nm to fishing, the waters outside are still subject to the Hawaii Archipelago FEP management measures, including management areas, gear restrictions, and other measures. For more information on NWHI crustacean fishery management measures, see Appendix C.

3.2.4 NWHI Precious Coral Fishery

While there have been no targeted fishing for precious corals in the Northwestern Hawaiian Islands (NWHI), there have been impacts to precious corals from mobile bottom-tending gear in the Emperor Seamount Chain (including Hancock Seamount) from foreign fisheries (Parrish et al, 2009). The interest in harvest of precious corals in the area resulted in the council designated WESTPAC Bank as a Precious Coral refugia to be set aside from harvesting in the NWHI, due to the abundance of *Corallium*. However, domestic harvest has never occurred in the NWHI and with the establishment of the NWHI Coral Reef Ecosystem Reserve through Executive Order (13178 and 13196) in 2001 and a Presidential Proclamation in 2006 establishing the Papahānaumokuākea Marine National Monument, precious coral fishing was prohibited within 50 miles of the NWHI.

While the Monument did close waters within 50 nm to fishing, the waters outside are still subject to the Hawaii Archipelago FEP management measures, including management areas, gear restrictions, and other measures. For more information on NWHI precious coral fishery management measures, see Appendix C.

3.3 Small Boat Pelagic Fisheries

The largest, non-pelagic longline fishery in the Hawaiian archipelago is the small-boat pelagic fleet. These fishermen utilize handline, troll, and other rod-and-reel methods that fish for offshore pelagic species such as tunas, mahimahi, wahoo and marlin. This fishery has deep connections to Hawaii's fishing communities and the social and cultural fabric of the islands. The pelagic troll fishery accounts for the majority of the commercial fishing licenses in Hawaii

and is the second largest commercial fishery (averaging over 3 million pounds caught per year). Between 2003 and 2013, there was an average of 1,535 commercial fishermen who fished for an average of over 29,000 days fished combined. During the same period, there was an average of 468 fishers that fished a combined average of 4,639 days, and 11 offshore handline fishers that fished 276 days. The non-commercial catch and effort is unknown but likely to be equal to, or greater than that of, the commercial fishery.

Pelagic trolling may be employed by the bottomfish fishing vessels, and other fisheries, as they transit to bottomfish fishing grounds in the MHI. Because of the distance from populated areas, the only small boat pelagic fishing done in the NWHI occurred at Midway through the US Fish and Wildlife Service. Effort and catch was very minimal. Small boat pelagics fisheries are regulated under the Council's Pacific Pelagic Fishery Ecosystem Plan and detailed information about them can be found in that FEP or the Pelagic Fishery Ecosystem Annual Report (SAFE Report).

3.4 Other Information Necessary for FEP Implementation

3.4.1 Sociocultural Data

Fishing culture and fishing dependence in Hawaii and the other U.S. Pacific islands are unique and distinct from a national perspective. Islanders have relied heavily on fishery resources to sustain themselves and their cultures for millennia. The ecosystem-based fishery management recognizes and attempts to manage for the interconnectedness of biological, ecological, geological, and social management dimensions. For many in islands communities, a fishery is social system that includes fish as well as fishermen, their families and friends, and, in the case of more commercialized fisheries, the associated support infrastructure and industry. Even those who buy and eat fish on a regular basis might be thought of as being part of a fishery.

Because of the importance of managing fishery resources as public trust, and because of the cultural uniqueness of the Pacific Islands, the Council has established several elements in its management process to incorporate science-based social data and traditional ecological knowledge. In fact, the Council from its inception has been very sensitive to traditional and indigenous fishing issues and considerations, and the Council's Guiding Principle #4 is to "recognize the importance of island cultures and traditional fishing practices in managing fishery resources and foster opportunities for participation." These issues include ensuring fishermen participation in setting ACLs, preserving indigenous way of life, navigating the relationship between federal processes and requirements and local custom and norms, and the dependence, on nearshore and pelagic resource, even in the modern era.

These process elements include formal social science input science the late 1980s via social science recommendations to the newly-established Pelagic Fisheries Research Program, and SSC subcommittee on social science, and a Council Cultural and Social Science Research Plan. In 1988, the Council spearheaded a request for proposals focused on native fishery rights issues and was instrumental in getting a Western Pacific Community Development Program and Plan included in 1996 reauthorization of the MSA. Following and in response to that, the Council established a Community Development Planning Committee. This committee is utilized under this FEP to assist with addressing Marianas Archipelago FEP Objective: Increase Traditional and Local Knowledge in Decision-making.

In Hawaii, the Council has encouraged, supported, and sometimes spearheaded efforts to reintroduce or strengthen traditional resource management ethos and/or practices. These include sponsoring a series of conferences (Puwalu) in the mid-2000s to bring together ahupuaʻa practitioners to discuss a community and cultural consultation process. The Council also supported an outgrowth of the Puwalu series: a resolution to uphold and continue Hawaiian traditional practices through konohiki management, the kapu system, and the creation of an ʻaha moku and ahupuaʻa management system – a site-specific and resource-based methodology to sustain healthy thriving communities based on Native Hawaiian generational knowledge. Finally, the Council has supported several individual projects such as the creation of lunar calendars, fishing koa identification, and the Hōkūleʻa Mālama Honua Worldwide Voyage.

Between 1999-2002, the Council worked to have the Secretary of Commerce formally designate fishing communities in American Samoa, the CNMI, Guam, and Hawaii under the MSA's fishing communities provision (National Standard 8) for the purposes of assessing the effects of fishery conservation and management measures on fishing communities, providing for the sustained participation of such communities, and minimizing adverse economic impacts on such communities. To date, ours is the only region that has done so. Fishing communities so designated in Hawaii are: Kauai, Niihau, Oahu, Maui, Molokai, Lanai, and Hawaii.

In 2002, the Council established a formal Social Science Research and Planning Committee (known now as the Social Science Committee). Among other things, this Committee vets social science information needs as part of the Council's identification of fishery research priorities. During the mid-2000s, as it worked to transition to ecosystem-based fishery management planning, the Council conducted a series of ecosystem planning workshops, including one dedicated to sociocultural considerations. The Council has used the recommendations from this workshop to improve the incorporation of social science in the management process.

Finally, the Council works to address sociocultural considerations via its "SEEM" process and its annual fishery (SAFE) reports. The SEEM assessment quantifies social, economic, and ecological factors, as well as management uncertainty dimensions and SEEM working groups thus recommend whether the ACL is set equal or lower than the ABC based on these considerations. The Council's annual/SAFE report was overhauled in 2015 to monitor a host of social variables.

To assist in identifying and analyzing sociocultural impacts on fisheries, the WPRFMC employs both an Indigenous Coordinator and a Social Scientist.

3.4.2 Protected Species Information

Bottomfish, precious coral, coral reef and crustacean fisheries managed under this FEP have limited impacts to protected species, and no specific regulations are in place to mitigate protected species interactions. Destructive gear such as bottom trawls, bottom gillnets, explosives and poisons are prohibited under this FEP, and these provide benefit to protected species by preventing potential interactions with non-selective fishing gear.

NMFS has determined that the bottomfish fishery operating under the Hawaii FEP is likely to adversely affect but not likely to jeopardize green sea turtles and are not likely to adversely affect other ESA-listed sea turtles, marine mammals (including Hawaiian monk seals and cetaceans), seabirds. All other fisheries operating under the Hawaii FEP are not likely to adversely affect ESA-listed sea turtles, marine mammals, and seabirds. The current list of ESA Section 7 consultations applicable to this FEP are listed in the archipelagic annual fishery report (SAFE Report). NMFS will reinitiate consultation if a new species is listed or critical habitat is designated that may be affected by Hawaii FEP fisheries. These fisheries are not known to interact with non-ESA listed marine mammals or seabirds.

Fisheries operating under the Hawaii FEP currently do not have federal observers on board. The NWHI component of the bottomfish fishery had federal observer coverage from 2003 to 2005. The Council monitors protected species interactions in the Hawaii FEP fisheries in the archipelagic annual fishery report (SAFE Report).using other proxy indicators such as fishing effort and changes in gear types.

3.4.3 Climate Change and Marine Planning

3.4.3.1 Climate Change

Changing climate is already adversely impacting island communities, ecosystems, resources, cultures and economies. Increasing pressures on valuable marine and coastal habitats and resources due to changing demands for food, energy, economic growth and community sustainability make climate change an issue of community, national and regional security. In addition to economic considerations such as commercial fisheries, Pacific Island communities must address threats to culturally important species and places as well as community health and food security. Ultimately, for many low-lying coral atoll nations, climate change is a direct threat to national security as rising sea level and changes in the availability of freshwater may make at least some of those nations uninhabitable. To escape these impacts, human migration is anticipated.

The *Executive Summary of the 2012 Pacific Islands Regional Climate Assessment* (PIRCA) notes that the indicators of climate change suggest multiple concerns for human and natural communities in the Pacific Islands region: decreased freshwater supplies, especially on atolls and low-lying islands; increased coastal flooding and erosion; increased coral bleaching; unknown, negative consequences for the entire marine ecosystem; declines in open-ocean fisheries; increased risk of species extinctions; threats to the traditional lifestyles of indigenous communities making it difficult for Pacific Island communities to sustain their connection with a defined place and their unique set of customs, beliefs, and languages; and human migration from low islands to high islands and continental sites.

At its 157th meeting in June 2013, the Council restructured its Coastal and Marine Spatial Planning (CMSP) Committee into a Marine Planning and Climate Change (MPCC) Committee. The MPCC Committee advises the Council on new and developing research and happenings related to marine planning and climate change as it relates to Western Pacific fisheries, provides input on Council actions and associated analyses and documents as it relates to marine planning and climate change, and recommends research and program priorities, including outreach and education, to address marine planning and impacts of climate change in fisheries and fishing

communities. The Committee includes up to 20 members, including at least three representatives each from Hawaii, American Samoa, Guam and the Commonwealth of the Northern Mariana Islands (one of the three is a community representative), three members representing the federal government and an ecosystem modeler. The basic criteria for Committee membership is expertise and interest in marine planning and climate change, with a focus on fisheries and fishing communities. Members of the Committee are selected by the Council and serve three-year terms.

In 2015, the Council adopted the MPCC Policy and action plan drafted by the MPCC Committee. The definition of climate change included in the MPCC Policy is the one used by the Intergovernmental Panel on Climate Change, which includes natural climate variability such as El Nino Southern Oscillation and other patterns of natural variability as well as long-term changes in climate associated with anthropogenic (human) influence on greenhouse gases and other aspects of the Earth's climate system. The definition of climate change in the Council's MPCC policy also includes ocean acidification. The MPCC policy notes that, in the Pacific Ocean, anticipated climate change impacts include ocean acidification; changing migratory patterns of tuna, other commercially valuable stocks and protected species, among other species; changes in coastal and marine habitats with associated changes in socially, culturally and economically valuable coastal fisheries and other sources of ocean economy; changing patterns of El Niño and other patterns of climate variability; changes in water level including, but not limited to sea level change, increased severity of extreme weather, coral reef changes; and human migration, among others. The MPCC policy recognizes a set of overarching and specific principles and specific policy points for the Council, its advisory bodies and its staff to consider and incorporate in the Hawaii Archipelago FEP as well as in Council programs and other actions. The policy can be found on the Council's website.

The Council's MPCC Action Plan prioritizes and provides guidance on implementing climate change measures adopted by the Council, including items related to climate change research and data needs.

A working group of the MPCC Committee, with additional support from PIFSC, tentatively identified climate indicators to monitor initially for the annual reports on the Council's FEPs. The working group suggested that, rather than focusing on the numeric changes and/or stability of these factors, the annual reports indicate whether the monitored indicators are in a green, yellow or red condition. The working group also suggested that the annual reports eventually also monitor climate change *impact* indicators, such as *socioeconomic indicators*, to be determined after community consultation. The Council's 2015 restructured Plan Team includes climate change experts who will finalize decisions related to the monitoring of climate indicators and climate impact indicators to be included in the Hawaii Archipelago FEP annual report. To identify the climate change impact indicators to be monitored in the Hawaii Archipelago, the Council intends to work with the Hawaii Department of Land and Natural Resources and Hawaii Office of State Planning, Coastal Zone Management, as well as community members, schools and policymakers in the Territory.

3.4.3.2 Marine Planning

In the Hawaii Archipelago, fisheries compete with other activities for fishing grounds and access to them. These activities include, but are not limited to, military bases and training activities, commercial shipping, marine protected areas, recreational activities and off-shore energy initiatives.

Marine planning is a tool utilized regionally, nationally and globally to identify and address issues of multiple human uses, ecosystem health and cumulative impacts and is a component of the National Ocean Policy. Since 2010, CMSP has been the focus of several of the Council's advisory body meetings and outreach activities. During this time, the Council also began transforming its Marine Protected Area Committee first into a CMSP Committee and then into the current Marine Planning and Climate Change Committee (see above for details on the Committee).

In 2015, the Western Pacific Regional Fishery Management Council adopted its MPCC Policy, which was drafted by the Council's MPCC Committee. The policy uses the definition of marine planning as defined in the National Ocean Policy Implementation Plan. The MPCC policy recognizes a set of overarching and specific principles and specific policy points for the Council, its advisory bodies and its staff to consider and incorporate in the Hawaii Archipelago FEP as well as in Council programs and other actions. The policy notes that marine planning can be used to determine ocean management priorities across jurisdictions and identify common objectives. The MPCC Policy recognizes that traditional resource management systems, such as the `Aha Moku, can provide an appropriate context for marine planning. A key component of the policy is collaboration with existing organizations in data and information collection, dissemination and outreach. The Council intends to work with the Hawaii Department of Land and Natural Resources, Hawaii Office of State Planning and the Pacific Islands Regional Planning Body, as well as community members, the private-sector, schools, policymakers and others in the State. The MPCC Policy can be found on the Council's website, www.wpcouncil.org. The Council's Plan Team (restructured in 2015) includes a marine planning expert, and a section on marine planning is included in the Hawaii Archipelago FEP annual reports.

3.4.4 Aquaculture

Aquaculture is a growing industry in the U.S. producing an ever-increasing proportion of marine consumer products once solely harvested from the wild. NMFS defines aquaculture as the as the propagation and rearing of aquatic organisms for any commercial, recreational, or public purpose. In the Pacific it has evolved into a multi-million dollar industry producing a range of marine products including algae, pearls, and fish. In the twentieth century, most aquaculture in the U.S. was conducted at land-based facilities and was focused on freshwater species. Technical innovations, declines in wild marine stocks, and greater demand for seafood have led to a recent expansion of the industry into marine environments.

The Council and NMFS is responsible for managing fisheries in federal water and NOAA determined that aquaculture is included in the definition of "fishing" under the Magnuson-

Stevens Fishery Conservation and Management Act (MSA)[9]. This designation provides the statutory authority for NMFS and the regional fishery management councils (FMCs) to regulate aquaculture projects in federal waters. NMFS and the FMCs are just beginning to establish management plans for aquaculture activities. In 2009, The Gulf of Mexico FMC established the first fishery management plan for offshore aquaculture. That same year, the Council voted to consider including management measures for offshore aquaculture in the FEPs at its 146th Meeting in October 2009.

The WPRFMC defines aquaculture as the raising and cultivation of plants or animals, both freshwater and marine, for food or other purposes. Aquaculture, as defined by the Council, includes fish farming, fish culturing, ocean ranching, and mariculture. The Western Pacific Regional Fishery Management Council recognizes that aquaculture is a rapidly developing industry in the Western Pacific Region as well as the rest of the world, and that aquaculture presents both potential benefits and potential negative impacts to the environment and society. The Council's Aquaculture Policy can be found at the Council's website, www.wpcouncil.org.

Currently, there are two aquaculture projects on-going in waters around Hawaii (in State waters) with more being planned. As the number and size of similar projects increase, NMFS and the Council must ensure that these endeavors are environmentally sustainable.

3.4.5 Fishing Rights of Indigenous People

The Council addresses the economic and social consequences of militarization, colonization and immigration on the aboriginal people in its area of responsibility and authority through its FEPs. Generally, the resultant cultural hegemony has manifested in poverty, unemployment, social disruption, poor education, poor housing, loss of traditional and cultural practices, and health problems for indigenous communities. These social disorders affect island society. Rapid changes in the patterns of environmental utilization are disruptive to ecological systems that developed over millennia into a state of equilibrium with traditional native cultural practices. The environmental degradation and social disorder impacts the larger community by reducing the quality of life for all island residents. The result is stratification along social and economic lines and conflict within the greater community.

The primary process for the indigenous community to formally participate in the Council process is through their participation in the Advisory Panel discussions. Grant workshops and other Council public fora provide additional opportunity for the indigenous community to participate in the Council process. The Council has sponsored the Hoʻohanohano I Nā Kūpuna (Honoring our Ancestors) conference series in partnership with the Association of Hawaiian Civic Clubs (AOHCC) and in consultation with the native Hawaiian community. The conference received the support of the Kamehameha Schools/Bishop Estate, Office of Hawaiian Affairs, various departments of the State of Hawaii, the Hawaii Tourism Authority and numerous community

[9] A 1993 legal opinion issued by NOAA's General Counsel supports the agency's position that the MSA confers authority on the Council and NMFS to manage aquaculture activities (NOAA Aquaculture Policy Statement June 2011).

organizations and projects throughout the State of Hawaii. Fishery ecosystem management provides the Council with the opportunity to utilize the *mana'o* (thoughts) and *'ike* (knowledge) of our *kūpuna* (elders) – ideas and practices that have sustained *nā kanaka maoli* (native Hawaiian) culture for millennia.

The conference series was initiated by the Council to engage the Kanaka Maoli community in the development of the Hawaiian Archipelago FEP and to increase their participation in the management of fisheries under the FEP's authority. A series of workshops with the Kanaka Maoli community to promote the concept of ahupua'a (traditional natural resource unit) management began in 2003 through the AOHCC. This endeavor was continued by the Council in order to take the ahupua'a concept to the next level, the development of a process to implement traditional resource management practices into today's management measures.

Under the Hawaiian Archipelago FEP, this conference series will continue in Hawaii and will subsequently be extended to the other areas of the Western Pacific Region. Although the specific format will be tailored to each area's cultures and communities, in all cases the Council will seek to increase the participation of indigenous communities in the harvest, research, conservation and management of marine resources as called for in Section 305 of the MSA.

There are two programs specifically mandated by the MSA for these communities to participate in the Council process: the Western Pacific Community Development Program and the Western Pacific Community Demonstration Project Program.

3.4.5.1 Western Pacific Community Development Program

The Western Pacific Regional Fishery Management Council (Council), since its inception, has continuously worked on issues related to indigenous fishing rights for Pacific Islanders. In 1996, amendments to the Magnuson-Stevens Fishery Conservation and Management Act recognized special fishing practices for native peoples in American Samoa, Guam, Hawaii and the Northern Mariana Islands in part through establishment of the Western Pacific Community Development Program (CDP). The CDP was further defined in the 2006 reauthorization of the MSA (MSRA). In developing the criteria for eligible communities provisions of the MSRA mandate that the Council shall base the criteria on "traditional fishing practices in or dependence on the fishery, the cultural and social framework relevant to the fishery, and economic barriers to access to the fishery."

The CDP was established with broad latitude in program development and implementation. The Western Pacific CDP provides flexibility in the method by which benefits can be delivered to indigenous communities. Because of the program's flexibility, different implementing approaches have been used to date. There is potential for a broad variety of community initiatives to come forward for consideration under the CDP, therefore, to facilitate the process the Council seeks to establish a standard procedure to receive, review, approve and implement future CDP initiatives. In addition, CDP initiatives may include the need to provide access to fisheries which would otherwise be restricted.

A community is eligible to participate in a western Pacific community development program and submit a Project proposal if they meet criteria developed by the WPRFMC and approved by the Secretary. The criteria and regulations for the CDP can be found in Appendix C.

3.4.5.2 Western Pacific Community Demonstration Project Program

The Community Demonstration Project Program (CDPP) is a grant program. The Council has an advisory panel which reviews and ranks proposals and forwards to the Council for approval and transmittal to the Secretary of Commerce.

The purpose of the Western Pacific Demonstration Project Program is to promote the involvement of western Pacific communities in fisheries by demonstrating the application and/or adaptation of methods and concepts derived from traditional indigenous practices. Projects may demonstrate the applicability and feasibility of traditional indigenous marine conservation and fishing practices; develop or enhance community-based opportunities to participate in fisheries; involve research, community education, or the acquisition of materials and equipment necessary to carry out a demonstration project.

To support this program, region wide grant application trainings and workshops are conducted by the Council. These workshops also provide a forum for the community to make recommendations and participate in the Council process. The Council develops the funding priorities.

4 MANAGEMENT PROCESS

4.1 Council Process

4.1.1 Overview of Council Process

The Council process to develop or change regulations involves many stages and includes many steps and opportunities for public input and comment. The Council considers proposals, options papers, draft amendment documents, National Environmental Policy Act analysis documents, and eventually votes on preferred alternatives, which may result in regulations at the end of the process.

The Council generally follows this process:

- An issue is brought to the Council's attention – presented from the public, an advisory body, or other avenue;
- The Council reviews the issue and decides whether to initiate an analysis of alternatives;
- If such an analysis is initiated, then:
    - Council staff develops alternatives, analysis and other needed documents for review;
    - There is a review by the Council, its advisory bodies and the public; and
    - The Council may select a preferred alternative, initiate further analysis or decide on no further action.
- After a preferred alternative is selected, the Council decision is forwarded to the Secretary of Commerce in the form of a plan or amendment for review and approval; The Secretary of Commerce may do either of the following:
    - Reject the plan/amendment;
    - Approve the plan/amendment;
    - Partially approve the plan/amendment.
- If the plan/amendment is approved, draft rules are published for public comment;
- After the rules are noticed and comments are addressed, a final decision is made by the Secretary of Commerce; and
- If approved, the rules and regulations from the plan/amendment are implemented through the Code of Federal Regulations.
- If the plan/amendment is rejected or partially approved, it is returned to the Council, with rationale for rejection/partial approval, for the Council's consideration.

4.1.1.1 Development and Approval Process for Management Actions

The MSA and OALs set forth specific analytical and procedural requirements that interact with NMFS' and Councils decision-making processes under the MSA. Mandates placed on NMFS, as the federal action agency, are distinct from the requirements pertaining to the activities of the Council, in their role as an advisory body. The Council is not precluded from developing analyses and documentation to support compliance with the OALs; in fact, this practice is recommended. However, legal responsibility for most requirements lies with the NMFS. The Council desires to have as complete analysis and documentation as possible available during its deliberations.

a. MSA Role of the Councils

As set forth in sections 302(h), 303, and 304 of the MSA, Councils are responsible for:

- Conducting public hearings to allow for public input into the development of FMPs and amendments,
- Reviewing pertinent information,
- Preparing fishery management plans and amendments for fisheries requiring conservation and management
- Drafting or deeming regulations to implement the plans or amendments
- Developing ACLs,
- Identifying research priorities, and
- Transmitting complete packages containing documentation necessary for NMFS to initiate a review of compliance with all applicable laws including NEPA.

b. MSA Role of NMFS

As set forth in section 304(a) of the MSA, the role of NMFS with respect to fishery management plans and plan amendments developed by the Council is to review– and approve, disapprove, or partially approve –those plans and amendments in accordance with specified procedures, including:

- Immediately upon transmittal of the FMP or FMP amendment: publish a plan or amendment in the Federal Register for a 60-day comment period.

- Approve, disapprove, or partially approve a plan or amendment within 30 days of the end of the comment period on the plan or amendment. Disapproval must be based on inconsistency with the MSA or other applicable law. In addition, disapprovals must provide guidance on what was inconsistent and how to remedy the situation, if possible (see MSA section 304(a)(3)(A)-(C)).

In addition, as set forth in section 304(b) the role of NMFS with respect to Council-recommended draft regulations is to:

- Immediately upon transmittal of the proposed regulations: initiate an evaluation of whether they are consistent with the fishery management plan, plan amendment, the MSA, and other applicable law.

- Within 15 days make a determination of consistency, and—

    - if that determination is affirmative: publish the regulations for a public comment period of 15 to 60 days; or,

    - if that determination is negative: notify the Council in writing of the inconsistencies and provide recommendations on revisions that would make the proposed regulations consistent.

- Consult with the Council before making any revisions to the proposed regulations,

- Promulgate final regulations within 30 days after the end of the comment period and publish in the Federal Register an explanation of any differences between the proposed and final regulations.

The MSA, at section 304(c), also authorizes NMFS to prepare a fishery management plan or amendment if:

(a) the Council fails to develop and submit to NMFS, after a reasonable period of time, a fishery management plan for such fishery, or any necessary amendment to such a plan, if such fishery requires conservation and management;

(b) the NMFS disapproves or partially disapproves any such plan or amendment, or disapproves a revised plan or amendment, and the Council involved fails to submit a revised or further revised plan or amendment; or

(c) the NMFS is given authority to prepare such plan or amendment under the MSA.
NMFS may also develop regulations to implement Secretarial plans and amendments (MSA section 304(c)(6), (7)).

c. Other Applicable Laws Roles for NMFS and Councils

As described in section D in Appendix 2 of the OG, the OALs set forth a variety of requirements for analysis, documentation, determinations, and procedures. Because of the close relationship between NMFS' actions and the Council's recommendations, compliance with the OALs will be most effective if NMFS and the Councils coordinate closely. The ROAs explain how these relationships work for each Council/Region pair. Council staff can often be responsible for drafting supporting analyses and documentation; however, it is the NMFS' responsibility to ensure the final documents are legally sufficient.

4.1.1.1.1 Specific Elements and their Relationship to Decision-making

The MSA and OALs set forth specific analytical and procedural requirements that interact with NMFS's and the Councils' decision-making processes under the MSA. The mandates on NMFS, as the federal action agency, are distinct from the requirements pertaining to the activities of the Councils, in their role as advisory bodies. Nothing precludes a Council's development of analyses and documentation to support compliance with the OALs, and in fact this practice is recommended. However, ultimate legal responsibility for most requirements lies with NMFS. It is the goal to have as complete analysis and documentation as possible available during Council deliberations.

MSA Role of the Councils

As set forth in sections 302(h), 303, and 304 of the MSA, Councils are responsible for:

- Conducting public hearings to allow for public input into the development of FMPs and amendments,
- Reviewing pertinent information,
- Preparing fishery management plans and amendments for fisheries requiring conservation and management
- Drafting or deeming regulations to implement the plans or amendments
- Developing ACLs,
- Identifying research priorities, and
- Transmitting complete packages containing documentation necessary for NMFS to initiate a review of compliance with all applicable laws including NEPA.

MSA Role of NMFS

As set forth in section 304(a) of the MSA, the role of NMFS with respect to fishery management plans and plan amendments developed by the Council is to review – and approve, disapprove, or partially approve –those plans and amendments in accordance with specified procedures, including:

- Immediately upon transmittal of the FMP or FMP amendment publish a plan or amendment in the Federal Register for a 60-day comment period.
- Approve, disapprove, or partially approve a plan or amendment within 30 days of the end of the comment period on the plan or amendment. Disapproval must be based on inconsistency with the MSA or other applicable law. In addition, disapprovals must provide guidance on what was inconsistent and how to remedy the situation, if possible (see MSA section 304(a)(3)(A)-(C)).

In addition, as set forth in section 304(b) the role of NMFS with respect to Council-recommended draft regulations is to:

- Immediately upon transmittal of the proposed regulations initiate an evaluation of whether they are consistent with the fishery management plan, plan amendment, the MSA, and other applicable law.
- Within 15 days make a determination of consistency, and—
  - if that determination is affirmative, publish the regulations for a public comment period of 15 to 60 days; or,
  - if that determination is negative, notify the Council in writing of the inconsistencies and provide recommendations on revisions that would make the proposed regulations consistent.
- Consult with the Council before making any revisions to the proposed regulations,
- Promulgate final regulations within 30 days after the end of the comment period and publish in the Federal Register an explanation of any differences between the proposed and final regulations.

The MSA, at section 304(c), also authorizes NMFS to prepare a fishery management plan or amendment if:

> (a) the appropriate Council fails to develop and submit to NMFS, after a reasonable period of time, a fishery management plan for such fishery, or any necessary amendment to such a plan, if such fishery requires conservation and management;
> (b) NMFS disapproves or partially disapproves any such plan or amendment, or disapproves a revised plan or amendment, and the Council involved fails to submit a revised or further revised plan or amendment; or
> (c) NMFS is given authority to prepare such plan or amendment under the MSA.
> NMFS may also develop regulations to implement Secretarial plans and amendments. (MSA section 304(c)(6), (7)).

Other Applicable Laws Roles for NMFS and COUNCIL

As described in section D in Appendix 2 of the OG, the OALs set forth a variety of requirements for analysis, documentation, determinations, and procedures. Because of the close relationship between NMFS's actions and the Council's recommendations, compliance with the OALs will

be most effective if NMFS and the Councils coordinate closely. The ROAs explain how these relationships work for each Council/Region pair. Council staff can often be responsible for drafting supporting analyses and documentation; however, it is NMFS's responsibility to ensure the resulting documents fully comply with all law.

4.1.1.1.2 Advisory Panels

Advisory Panels are established as necessary to assist in carrying out the functions of the Council under the MSA. Section 302(g)(4) of the MSA establishes Advisory Panels to "assist in the evaluation of information relevant to the development of any fishery management plan or plan amendment for a fishery." The Western Pacific Regional Fishery Management Council's Advisory Panel includes representation from various sectors of the fisheries. Members of the Subpanels are selected by the Council and serve four-year terms with an overall Advisory Panel Chair and a Vice-Chair, with a Chair for each Advisory Panel sub-panel. Sub-panels are designated by the Archipelago FEPs and have representation from user groups and interests concerned with management of the fishery including fair representation of commercial fishing interests in the Council's geographical area of authority. The Advisory Panel provides advice on the content and effects of management plans, amendments and pre-season and in-season management measures, as well as issues to be discussed at Council Meetings.

The Hawaiian Archipelago FEP Sub-Panel includes 8 members, not including alternates, and meets prior to Council Meetings to discuss action items and provide comments and recommendations on issues of concern to the Council. Recommendations from the Advisory Panel and its Sub-Panels are provided to the Council for its consideration at Council Meetings.

4.1.1.1.3 Plan Teams

Plan teams are a form of advisory panel authorized under Section 302(g) of the MSA. FEP Plan Teams are comprised of Federal, State and non-government specialists that are appointed by the Council and serve indefinite terms. The Council created an Archipelagic FEP Plan Team to oversee the ongoing development and implementation of the American Samoa, Hawaii, Mariana, and PRIA FEPs. The Team is also responsible for reviewing information pertaining to the performance of all the fisheries, the status of all the stocks managed under the four Archipelagic FEPs, monitoring the performance of the FEP through the production of an annual stock assessment and fishery evaluation (SAFE) report , providing information on the status of the fish stocks and other components of the ecosystem, and recommending conservation and management adjustments under framework procedures to better achieve management objectives. The Archipelagic Plan Team's findings and recommendations are reported to the Council at its regular meetings. The Archipelagic Plan Team meets at least once annually and its chair is appointed by the Council Chair after consultation with the Council's Executive Standing Committee.

4.1.1.1.4 Science and Statistical Committee

The Scientific and Statistical Committee (SSC) is mandated under MSA 302(g) to "assist the Council in the development, collection, evaluation, and peer review of such statistical, biological, economic, social, and other scientific information as is relevant to such Council's development and amendment of any fishery management plan." The Western Pacific Regional Fishery Management Council's SSC is composed of experts with scientific or technical

credentials and experience from State and Federal agencies, academic institutions, and other sources. SSC Members represent a wide range of disciplines required for preparation and review of Fishery Ecosystem Plans.

The SSC typically meetings several days prior to a Council meeting to identify scientific resources required for the development of management plans and amendments and recommend resources for Plan Teams; Identify scientific resources required for the development of management plans and amendments and recommend resources for Plan Teams; Provide ongoing multi-disciplinary review of management plans or amendments and advise the Council on their scientific content, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield and achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures and sustainability of fishing practices; Assist the Council in the development, collection, evaluation and peer review of such statistical, biological, economic, social, and other scientific information as is relevant to the Council's activities, and recommend methods and means for the development and collection of such information; Recommend to the Council the composition of Plan Teams; and provide scientific advice to the Council through recommendations on issues and action items.

4.1.1.1.5 Fishing Industry Advisory Committee

Section 302(g) of the MSA requires the Council to establish a Fishing Industry Advisory Committee (FIAC). It includes representation from various fishing sectors of the Western Pacific region. Members of the committee are selected by the Council and serve four year terms, with representation from each of the island jurisdictions. The FIAC reports to the Council and has representation from industry user groups concerned with the management of the fishery for which a plan is being prepared or reviewed, with fair representation of the fishing industry interests in the Council's geographical area of authority. The functions of the FIAC are to advise the Council on fishery management problems; to provide input to the fishery management planning efforts; and to advise the Council on the content and effects of management plans, amendments, and pre-season and in-season management measures. The FIAC includes 10 members from each Archipelagic FEP (with the PRIA FEP included with the Hawaii FEP).

4.1.1.1.6 REAC and other Council Committees

The Regional Ecosystem Advisory Committee (REAC)'s primary role is to provide a forum for government agencies, organizations and other entities to share information to better integrate and coordinate ocean and coastal management. Sub-committees for each area are created with members that include representation from the Council, various Federal, State and local agencies, non-government specialists and private business from each respective area. Members of the REAC are appointed by the Council with the Chair of each area sub-committee appointed by the Council Chair after consultation with the Executive and Budget Committee.

Other Council Committees created to assist the Council in carrying out its statutory functions, as provided under section 302(g)(2) of the MSA include:

- Protected Species Advisory Committee
- Social Science Planning Committee
- Community Demonstration Projects Advisory Panel

- Community Development Program Advisory Panel
- Fishery Data Collection and Research Committee
- Marine Planning and Climate Change Committee
- Education Committee
- Non-Commercial Fisheries Advisory Committee

4.1.1.1.7 Ad-hoc Committees and Working Groups

The Council develops different ad-hoc committees and working groups to deal with specific issues relevant to the FEP and assist it in carrying out its statutory function.

4.1.1.1.8 Federal, State, and Local Agencies/Entities

4.1.1.1.8.1 National Marine Fisheries Service

The NMFS implements Council recommendations and is a primary federal enforcement agency for fisheries and other marine resource regulations. Recommendations from the Council, including transmitted amendments and plans, are provided to the NMFS and the Department of Commerce for approval. The Secretary of Commerce may approve, partially-approve, or reject any amendment or plan, in which case the Council will revisit or revise any partially-approved or rejected amendment or plan.

Regionally, the Council works in conjunction with the NMFS Pacific Islands Regional Office (PIRO) and the Pacific Islands Fisheries Science Center (PIFSC).

4.1.1.1.8.2 US Fish and Wildlife Service

The US Fish and Wildlife Service is a non-voting member of the Council and provides information as needed. In the Hawaiian archipelago, the USFWS, along with NMFS, is responsible for managing parts of the Northwestern Hawaiian Islands. Good coordination between the Council and USFWS is crucial for the success of any regulations issued in the area.

4.1.1.1.8.3 United States Coast Guard

The United States Coast Guard, District 14, is responsible for fishery regulation enforcement in the Hawaiian archipelago, including enforcing regulations listed in the FEP, and is a non-voting member of the Council.

4.1.1.1.9 Local Agencies

The Council works with the State of Hawaii Department of Land and Natural Resources (DLNR), including, but not limited to, its Division of Aquatic Resources (DAR), Division of Boating and Ocean Recreation (DOBOR), Division of Conservation and Resource Enforcement (DOCARE) and Aha Moku Advisory Committee, on fishery issues and concerns. The MHI Deep-7 bottomfish fishery is co-managed with DLNR for improved data collection, compliance, and near-real time quota monitoring. The State of Hawaii is responsible for the management of fisheries within nearshore waters (0-3 miles) and has their own fishing regulations and policies which fishermen must adhere to while fishing. These regulations may be found on the State of Hawaii DLNR, DAR website.

The Council has also worked with the City and County of Honolulu on fishery issues as they have jurisdiction over the NWHI as well. Through the REAC, the Council is also able to work with other local agencies and local non-governmental organizations.

4.1.1.1.10 Other Federal Entities

4.1.1.1.10.1 Papahānaumokuākea Marine National Monument

On June 15, 2006, President Bush issued Executive Order 8031 designating the NWHI a Marine National Monument under the Antiquities Act for the purpose of protecting the natural and cultural resources of the area. This portion of the Hawaiian archipelago, once open to fishing under the Council's FEP, closed nearly 140,000 square miles to fishing. The Council's regulations for the NWHI were superseded within 50 miles of the islands, and management within the waters of Papahānaumokuākea is divided between the State of Hawaii, the Secretary of Commerce, and the Secretary of the Interior.

While fishing is prohibited for all purposes but sustenance while in the monument, fishing can and may occur outside of the monument boundaries. In that area of the PMNM, the Council's FEP regulations are still in effect. The Council also participates in the NWHI Reserve Advisory Committee that is serves as a defacto advisory council to PMNM.

4.1.1.1.10.2 Hawaiian Islands Humpback Whale National Marine Sanctuary

The Hawaiian Islands Humpback Whale National Marine Sanctuary was created by Congress in 1992 to protect Humpback Whales. The Sanctuary includes both Federal and State waters (from shoreline to 100 fm isobaths) in the Main Hawaiian Islands and uses education, outreach and regulations on boaters and ocean activities to protect humpback whales and their habitat. It is co-managed between the State of Hawaii and the National Ocean Service. The Council is a voting member of the Sanctuary Advisory Council, which provides advice to the Sanctuary on operations. While the Sanctuary's designation document does not provide for the management of fishing operations at this time, the Council continues to be involved in the sanctuary operations to determine and minimize impacts on fishing should future expansions bring changes (NOAA 1997).

4.1.1.1.10.3 Department of Defense

A number of Executive Orders have given administrative authority over territories and possessions to the Army, Navy, or the Air Force for use as military airfields and for weapons testing. In particular, Executive Order 8682 of 1941 authorizes the Secretary of the Navy to control entry into the Naval Defensive Sea Areas (NDSA) around Johnston and Midway Atolls. The NDSA includes "territorial waters between the extreme high-water marks and the three-mile marine boundaries surrounding" the areas noted above. The objectives of the NDSA are to control entry into naval defensive sea areas; to provide for the protection of military installations; and to protect the physical security of, and ensure the full effectiveness of, bases, stations, facilities, and other installations (32 CFR Part 761). In addition, the Navy has joint administrative authority with the USFWS of Johnston Atoll. In 1996 Executive Order 13022 rescinded the Midway Atoll NDSA.

The Navy exerts jurisdiction over Kaula Rock in the MHI, which is used as a military bombing range. The Navy also exerts jurisdiction over a variety of waters offshore from military ports and air bases in the Hawaiian archipelago.

4.1.1.1.11 Regional Entities and International Coordination.

International coordination is an important component of marine resource management within the island areas of the Western Pacific Region. For example, fish stocks and other marine resources that found within the Hawaiian archipelago may be part of larger populations that occur on larger geographic scales. However, there are no current regional entities involved in fisheries management in the Hawaiian archipelago, though there is a North Pacific Seamount Regional Fishery Management Organization (RFMO) that may deal with seamount groundfish and potentially bottomfish in the future that may impact Hawaii bottomfish and seamount groundfish fisheries and Precious Coral fisheries. Pelagic fisheries based out of Hawaii may be involved in fisheries management of pelagic species through multiple RFMOs and their description and coordination with Hawaii pelagic fisheries can be found in the Pacific Pelagics Fishery Ecosystem Plan.

4.1.2 Fishery Impact Statement

The Magnuson-Stevens Act requires that fishery management plan and plan amendments submitted to the Secretary after October 1, 1990 assesses the likely biological and socioeconomic effects of the conservation and management measures on fishery participants and their communities; participants in the fisheries conducted in adjacent areas under the authority of another Council; and the safety of human life at sea. This is typically referred to as a Fishery Impact Statement (FIS). Appendix D contains a list of all relevant amendments that predate this FEP, as well as amendments that were approved subsequent to its adoption. The elements of a FIS are integrated into the environmental impact analyses prepared for these amendment documents, as required. To find a FIS for a specific management measure contained in this FEP, see Appendix D.

4.1.3 Public Consultation Process

The public is provided opportunity to comment on, and provide testimony at, all meetings noticed through the Federal Register. The Council also accepts comments and testimony by phone, email and fax.

4.2 The Role of Agreements, Statement of Organization Practices and Procedures, etc.

The Council enters into agreements to define specific roles and responsibilities of the agencies in developing, approving, and implementing fishery management plans and actions under the MSA. In 2014, the Council entered into a Regional Operating Agreement with the NMFS PIRO and PIFSC to define specific roles and responsibilities of the Council and NMFS Offices in developing, approving and implementing fishery actins under the MSA. The ROA sets forth procedures and review processes to ensure that proposed management actions are adequately and completely analyzed upon decision making. The ROA functions with the general framework of the "Operational Guidelines" set forth by NOAA and can be amended as need for consistency.

In addition to external agreements, the Council establishes internal working policies and procedures to through which the Council conducts business and carries out its functions under

the MSA. The Statement of Organization Practices and Procedures (SOPP) is updated periodically as needed. The SOPP defines the Council's organizational structure, standards of conduct, policies and procedures, advisory bodies and their role and responsibilities and administrative system.

4.3 Council Communications

Communication is an essential component of the Council's bottom-up approach to fisheries management and is one of the Council's seven Guiding Principles: "Conduct education and outreach to foster good stewardship principles and broad and direct public participation in the Council's decision making process."

The Council's Public Involvement and Outreach Plan was prepared in 1995 and serves as the basis for the Council's ongoing communication efforts. The plan identifies training sessions, programs, information sessions, special events and product development (audio-visual, printed materials and displays) for three targeted audiences: fishing communities, regulatory/policy setting agencies and the general public.

In 2010 and 2011, fishermen focus groups were conducted in Hawaii to assess the effectiveness of the Council's outreach efforts and elicit suggestions for improving it. This research was conducted by an independent research firm, which also conducted interviews to gauge the effectiveness of particular Council outreach projects in the Territories and the Commonwealth. The results indicated that fishermen were aware of the Council; however, their understanding of what the Council does could be improved. In 2011, in response to these comments, the Council developed a Communications Framework among other activities.

The Council publishes meeting notices in local publications in English and, in American Samoa, also in the Samoan language. Other regular Council outreach materials include a quarterly newsletter, a monograph series, brochures, displays, magazine articles and press releases and occasional videos, public serve announcements, proceedings and books.

The Council's regularly scheduled outreach and education activities, some of which have been conducted annually for more than a decade, include Fishers Forums, student art contests with teacher resources on various themes of fishery importance, traditional lunar calendars highlighting student art and traditional fishery information, and high school summer courses. The Council also occasionally conducts International Fishers Forums, teacher workshops, student symposiums, community workshops, fishermen workshops and other special events locally, regionally, nationally and internationally.

In 2013, the Council established an Education Committee, which spearheaded a memorandum of understanding signed by federal and local governments and higher education institutions in the Western Pacific Region. The aspiration of the MOU is to improve the capacities of the US Pacific Island territories to manage their fisheries and to enhance tertiary education in fisheries science and management offered in Hawai`i. In 2015, the first outcomes of the MOU included the implementation of the US Pacific Territories Fishery Capacity-Building scholarship and internship program.

The Council has increased its outreach through social media, including the Council website, Facebook, Twitter and Constant Contact distribution. It also works with the education and outreach staff of the other seven Reginal Fishery Management Councils on the fisherycouncils.org website, Managing Our Nation's Fisheries conferences and occasional publications, displays and events.

4.4 Council Five Year Research Priorities

The reauthorized Magnuson-Stevens Fishery Conservation and Management Act (MSRA), created new responsibilities and authorities for domestic regional fishery management councils and their advisory bodies. Following is the relevant MSRA text regarding the development and implementation of five-year regional research priorities by Councils. Section 302 (h) Each Council shall develop, in conjunction with the scientific and statistical committee, multi-year research priorities for fisheries, fishery interactions, habitats, and other areas of research that are necessary for management purposes that shall –

> (A) establish priorities for 5-year periods;
> (B) be updated as necessary; and
> (C) be submitted to the Secretary and the regional science centers of the National Marine Fisheries Service for their consideration in developing research priorities and budgets for the region of the Council.

The research priority document is vetted through the Council advisory groups and submitted to the Secretary of Commerce and NMFS on an annual basis for their consideration. These priorities are also the basis for Federal funding opportunities such as the Saltonstall-Kennedy Grant Program. A process of addressing and monitoring these research priorities is yet to be developed by the Council and NMFS PIFSC.

Stock assessments for Council managed fisheries remains the highest research priority. For current research priorities, see the Council's website at www.wpcouncil.org.

4.5 Western Pacific Sustainable Fisheries Fund

MSA Section 204(e)(7) provides for a Western Pacific Sustainable Fisheries Fund (WPSFF) "into which any payments received by the Secretary (of Commerce) under a Pacific Insular Area fishery agreement and any funds or contributions received in support of conservation and management objectives under a marine conservation plan for any Pacific Insular Area other than American Samoa, Guam, or the Northern Mariana Islands shall be deposited." These funds are used to implement Marine Conservation Plans (MCPs) developed under MSA Section 204(e)(4) for the Pacific Insular Areas. The WPSFF may also be used for projects to support Hawaiian archipelago fisheries if there is remaining funding after funding MCP projects. The Council utilizes the WPSFF to assist in fisheries development, research, and characterization in the Western Pacific.

4.6 Annual Fishery Reports and their Use

The Council's annual fishery reports serve as Stock Assessment and Fishery Evaluation (SAFE) reports for the Western Pacific region and contain information beyond the SAFE report requirements found in National Standard 2. The reports are generated by the Archipelagic and

the Pelagic Plan Team and contain information about the MUS and their associated ecosystems derived from fishery dependent and fishery independent data collection systems. Some of the major elements in the reports are:

> **Fishery Descriptions**: 1) number of participants; 2) number of permit holders; 3) type and quantity of fishing gear used; 4) number of vessels involved; 5) frequency of trips; 6) trip costs; 7) average number of crew or fishing party; 8) species of fish involved and their location(s); 9) disposition of catch; 10) annual catch limit; 11) Status Determination Criteria; 12) Overfishing Limit and Allowable Biological Catch; 13) measures to prevent overfishing and achieve rebuilding targets; 14) sources of fishing mortality; 15) harvest capacity and extent; 16) fishing communities associated with the fishery; 16) fishery bycatch
>
> **Fishery Ecosystems**: 1) oceanographic indicators; 2) climate change indicators; 3) biological indicators; 4) habitat (status of fish habitat and marine ecosystem; EFH descriptions information; species list and locations; fishing activities that may adversely affect EFH; and non-fishing activities that may adversely affect EFH); 5) human dimensions (describing the participants; community indicators; cultural importance; economics; imports and exports); 6) protected species (incidental take data in FEP Authorities and Primary Management and Process Drivers.
>
> **Data Integration and Fishery Characterizations:** 1) fishery and ecosystem indicator integration; 2) fishery and socio-economic indicator integration; 3) fishery and climate indicator integration

The annual fishery ecosystem reports are used to monitor the fisheries and the status of fishery ecosystems. Because they contain the most recent information about the fisheries, they serve as the basis for developing management measures and evaluating management alternatives as well as tracking the performance of this FEP. A comprehensive report will be generated that contains analysis of available data and will be updated on a 3-year cycle. Summaries of datasets that are generated on an annual basis will be produced annually.

4.7 Other Applicable Laws and their Role

Section 303(a)(1)(C) of the MSA requires federal fishery management plans to be consistent with other applicable laws. These other laws impose additional procedural, substantive, and timing requirements on the decision process and their applicability must be assessed on a case-by-case basis. This FEP is consistent with the Magnuson-Stevens Act (16 USC 1851), including the ten National Standards, and other applicable law. These laws typically include the following:

- Administrative Procedure Act
- Coastal Zone Management Act
- Endangered Species Act
- National Monument
- Information Quality Act
- Marine Mammal Protection Act
- National Environmental Policy Act

- National Marine Sanctuaries Act
- Paperwork Reduction Act
- Regulatory Flexibility Act
- Executive Orders 12291 (*cost-benefit and avoiding duplication*), 12630 (*governmental actions and interference with constitutionally protected property rights*), 12866 (*regulatory planning and review*), 12898 (*environmental justice*), 13089 (*coral reef protection*), 13132 (*federalism implication of federal actions*), 13158 (*marine protected areas*), 13175 (*consultation and coordination with Indian tribal governments*), 13196 (*Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve*), 13272 (*stewardship of the ocean, our coasts, and the Great Lakes*), 13547 (*National Ocean Policy*) and 12962 (*recreational fisheries*).
- Presidential Proclamation 8031 and 8112 (*establishing the Papahānaumokuākea Marine National Monument*)

Specific information regarding the implications of each of these can be in the Operational Guidelines for the Fishery Management Process developed by NMFS in consultation with the Council Coordinating Committee at www _____. The statutes themselves, along with their guidance language, regulations, and associated case law are controlling in the instance of any discrepancy between them and this document.

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Appendix A: List of Acronyms

APA: Administrative Procedure Act

B: Stock biomass

B_{FLAG}: Minimum Biomass Flag

B_{MSY}: Biomass Maximum Sustainable Yield

B_{OY}: Biomass Optimum Yield

BMUS: Bottomfish Management Unit Species

CFR: Code of Federal Regulations

CITES: Council on International Trade and Endangered Species

CNMI: Commonwealth of the Northern Mariana Islands

CPUE: Catch per unit effort at the reference point

$CPUE_{MSY}$: Catch per unit effort Maximum Sustainable Yield

$CPUE_{REF}$: Catch per unit effort at the Reference Point

CRAMP: Coral Reef Assessment and Monitoring Program

CRE: Coral Reef Ecosystem

CRE-FMP: Coral Reef Ecosystem Fishery Management Plan

CRTF: Coral Reef Task Force

DAR: Division of Aquatic Resources, State of Hawaii

DOC: United States Department of Commerce

DOD: United States Department of Defense

DOI: United States Department of the Interior

EEZ: Exclusive Economic Zone

EFH: Essential Fish Habitat

EIS: Environmental Impact Statement

E_{MSY}: Effort Maximum Sustainable Yield

ENSO: El Niño Southern Oscillation

EO: Executive Order

EPAP: Ecosystem Principals Advisory Panel

ESA: Endangered Species Act

F: Fishing mortality

F_{MSY}: Fishing mortality Maximum Sustainable Yield

F_{OY}: Fishing mortality Optimum Yield

FEP: Fishery Ecosystem Plan

FLPMA: Federal Land Policy and Management Act

fm: fathoms

FMP: Fishery Management Plan

FR: Federal Register

FRFA: Final Regulatory Flexibility Analysis

ft: feet

FWCA: Fish and Wildlife Coordination Act

GIS: Geographic information systems

GPS: Global Positioning System

HAPC: Habitat Areas of Particular Concern

IQA: Information Quality Act

IRFA Initial Regulatory Flexibility Analysis

kg: kilograms

km: kilometers

lb: pounds

LOF List of Fisheries

m:	meters
mt:	metric tons
MFMT:	maximum fishing mortality threshold
MHI:	Main Hawaiian Islands
min SST:	minimum spawning stock threshold
mm:	millimeters
MMPA:	Marine Mammal Protection Act
MPA:	Marine Protected Area
MSA:	Magnuson-Stevens Fishery Conservation and Management Act
MSST:	Minimum Stock Size Threshold
MSY:	Maximum Sustainable Yield
MUS:	Management Unit Species
NDSA:	Naval Defense Sea Areas
NEPA:	National Environmental Policy Act
nm or nmi:	nautical miles
NMFS:	National Marine Fisheries Service (also known as NOAA Fisheries Service)
NOAA:	National Oceanic and Atmospheric Administration
NWHI:	Northwestern Hawaiian Islands
NWR:	National Wildlife Refuge
NWRSAA:	National Wildlife Refuge System Administration Act
OMB:	Office of Management and Budget
OY:	Optimum Yield
PBR:	Potential Biological Removal
PIFSC:	Pacific Islands Fisheries Science Center, NMFS
PIRO:	Pacific Islands Regional Office, NMFS

PRA: Paperwork Reduction Act

PRIA: Pacific Remote Island Areas

RFA: Regulatory Flexibility Act

RIR: Regulatory Impact Review

SFA: Sustainable Fisheries Act

SLA: Submerged Lands Act

SPR: Spawning Potential Ratio

SSC: Scientific and Statistical Committee

TALFF: Total Allowable Level of Foreign Fishing

TSLA: Territorial Submerged Lands Act

USCG: United States Coast Guard

USFWS: United States Fish and Wildlife Service

VMS: Vessel Monitoring System

WPacFIN: Western Pacific Fisheries Information Network, NMFS

WPRFMC: Western Pacific Regional Fishery Management Council

Appendix B: List of Definitions

Adaptive Management: A program that adjusts regulations based on changing conditions of the fisheries and stocks.

Bycatch: Any fish harvested in a fishery which are not sold or kept for personal use, and includes economic discards and regulatory discards.

Barrier Net: A small-mesh net used to capture coral reef or coastal pelagic fishes.

Bioprospecting: The search for commercially valuable biochemical and genetic resources in plants, animals and microorganisms for use in food production, the development of new drugs and other biotechnology applications.

Charter Fishing: Fishing from a vessel carrying a passenger for hire (as defined in section 2101(21a) of Title 46, United States Code) who is engaged in recreational fishing.

Commercial Fishing: Fishing in which the fish harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter or trade. For the purposes of this Fishery Ecosystem Plan, commercial fishing includes the commercial extraction of biocompounds.

Consensual Management: Decision making process where stakeholders meet and reach consensus on management measures and recommendations.

Coral Reef Ecosystem (CRE): Those species, interactions, processes, habitats and resources of the water column and substrate located within any waters less than or equal to 50 fathoms in total depth.

Council: The Western Pacific Regional Fishery Management Council (WPRFMC).

Critical Habitat: Those geographical areas that are essential for bringing an endangered or threatened species to the point where it no longer needs the legal protections of the Endangered Species Act (ESA), and which may require special management considerations or protection. These areas are designated pursuant to the ESA as having physical or biological features essential to the conservation of listed species.

Dealer: Any person who (1) Obtains, with the intention to resell management unit species, or portions thereof, that were harvested or received by a vessel that holds a permit or is otherwise regulated under this FEP; or (2) Provides recordkeeping, purchase, or sales assistance in obtaining or selling such management unit species (such as the services provided by a wholesale auction facility).

Dip Net: A hand-held net consisting of a mesh bag suspended from a circular, oval, square or rectangular frame attached to a handle. A portion of the bag may be constructed of material, such as clear plastic, other than mesh.

Ecology: The study of interactions between an organism (or organisms) and its (their) environment (biotic and abiotic).

Ecological Integrity: Maintenance of the standing stock of resources at a level that allows ecosystem processes to continue. Ecosystem processes include replenishment of resources, maintenance of interactions essential for self-perpetuation and, in the case of coral reefs, rates of accretion that are equal to or exceed rates of erosion. Ecological integrity cannot be directly measured but can be inferred from observed ecological changes.

Economic Discards: Fishery resources that are the target of a fishery but which are not retained because they are of an undesirable size, sex or quality or for other economic reasons.

Ecosystem: A geographically specified system of organisms (including humans), the environment, and the processes that control its dynamics.

Ecosystem-Based Fishery Management: Fishery management actions aimed at conserving the structure and function of marine ecosystems in addition to conserving fishery resources.

Ecotourism: Observing and experiencing, first hand, natural environments and ecosystems in a manner intended to be sensitive to their conservation.

Environmental Impact Statement (EIS): A document required under the National Environmental Policy Act (NEPA) to assess alternatives and analyze the impact on the environment of proposed major Federal actions significantly affecting the human environment.

Essential Fish Habitat (EFH): Those waters and substrate necessary to a species or species group or complex, for spawning, breeding, feeding or growth to maturity.

Exclusive Economic Zone (EEZ): The zone established by Proclamation numbered 5030, dated March 10, 1983. For purposes of the Magnuson Act, the inner boundary of that zone is a line coterminous with the seaward boundary of each of the coastal states, commonwealths, territories or possessions of the United States.

Exporter: One who sends species in the fishery management unit to other countries for sale, barter or any other form of exchange (also applies to shipment to other states, territories or islands).

Fish: Finfish, mollusks, crustaceans and all other forms of marine animal and plant life other than marine mammals and birds

Fishery: One or more stocks of fish that can be treated as a unit for purposes of conservation and management and that are identified on the basis of geographical, scientific, technical, recreational and economic characteristics; and any fishing for such stocks.

Fishery Ecosystem Plan: A fishery ecosystem management plan that contains conservation and management measures necessary and appropriate for fisheries within a given ecosystem to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery.

Fishing: The catching, taking or harvesting of fish; the attempted catching, taking or harvesting of fish; any other activity that can reasonably be expected to result in the catching, taking or harvesting of fish; or any operations at sea in support of, or in preparation for, any activity described in this definition. Such term does not include any scientific research activity that is conducted by a scientific research vessel.

Fishing Community: A community that is substantially dependent on or substantially engaged in the harvest or processing of fishery resources to meet social and economic needs and includes fishing vessel owners, operators and crews and United States fish processors that are based in such community.

Food Web: Inter-relationships among species that depend on each other for food (predator-prey pathways).

Framework Measure: Management measure listed in an FEP for future consideration. Implementation can occur through an administratively simpler process than a full FEP amendment.

Ghost Fishing: The chronic and/or inadvertent capture and/or loss of fish or other marine organisms by lost or discarded fishing gear.

Habitat: Living place of an organism or community, characterized by its physical and biotic properties.

Habitat Area of Particular Concern (HAPC): Those areas of EFH identified pursuant to Section 600.815(a)(8). In determining whether a type or area of EFH should be designated as a HAPC, one or more of the following criteria should be met: (1) ecological function provided by the habitat is important; (2) habitat is sensitive to human-induced environmental degradation; (3) development activities are, or will be, stressing the habitat type; or (4) the habitat type is rare.

Harvest: The catching or taking of a marine organism or fishery MUS by any means.

Hook-and-line: Fishing gear that consists of one or more hooks attached to one or more lines.

Live Rock: Any natural, hard substrate (including dead coral or rock) to which is attached, or which supports, any living marine life-form associated with coral reefs.

Longline: A type of fishing gear consisting of a main line which is deployed horizontally from which branched or dropper lines with hooks are attached.

Low-Use MPA: A Marine Protected Area zoned to allow limited fishing activities.

Main Hawaiian Islands (MHI): The islands of the Hawaiian Islands archipelago consisting of Niihau, Kauai, Oahu, Molokai, Lanai, Maui, Kahoolawe, Hawaii and all of the smaller associated islets lying east of 161° W longitude.

Marine Protected Area (MPA): An area designated to allow or prohibit certain fishing activities.

Marine National Monument (MNM):

Maximum Sustainable Yield (MSY): The largest long-term average catch or yield that can be taken, from a stock or stock complex under prevailing ecological and environmental conditions and fishery technological characteristics (e.g., gear selectivity), and the distribution of catch among fleets.

National Marine Fisheries Service (NMFS): The component of the National Oceanic and Atmospheric Administration (NOAA), Department of Commerce, responsible for the conservation and management of living marine resources. Also known as NOAA Fisheries Service.

No-Take MPA: A Marine Protected Area where no fishing or removal of living marine resources is authorized.

Northwestern Hawaiian Islands (NWHI): the islands of the Hawaiian Islands archipelago lying to the west of 161°W longitude.

Optimum Yield (OY): With respect to the yield from a fishery "optimum" means the amount of fish that: (a) will provide the greatest overall benefit to the nation, particularly with respect to food production and recreational opportunities and taking into account the protection of marine ecosystems; (b) is prescribed as such on the basis of the MSY from the fishery, as reduced by any relevant economic, social or ecological factor; and (c) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the MSY in such fishery.

Overfished: A stock or stock complex is considered "overfished" when its biomass has declined below a level that jeopardizes the capacity of the stock or stock complex to produce maximum sustainable yield on a continuing basis.

Overfishing: (to overfish) occurs whenever a stock or stock complex is subjected to a level of fishing mortality or total annual catch that jeopardizes the capacity of a stock or stock complex to produce maximum sustainable yield on a continuing basis.

Pacific Remote Island Areas (PRIA): Baker Island, Howland Island, Jarvis Island, Johnston Atoll, Kingman Reef, Midway Atoll, Wake Island and Palmyra Atoll.

Passive Fishing Gear: Gear left unattended for a period of time prior to retrieval (e.g., traps, gill nets).

Precautionary Approach: The implementation of conservation measures even in the absence of scientific certainty that fish stocks are being overexploited.

Recreational Fishing: Fishing for sport or pleasure.

Recruitment: A measure of the weight or number of fish which enter a defined portion of the stock such as fishable stock (those fish above the minimum legal size) or spawning stock (those fish which are sexually mature).

Reef: A ridgelike or moundlike structure built by sedentary calcareous organisms and consisting mostly of their remains. It is wave-resistant and stands above the surrounding sediment. It is characteristically colonized by communities of encrusting and colonial invertebrates and calcareous algae.

Reef-obligate Species: An organism dependent on coral reefs for survival.

Regulatory Discards: Any species caught that fishermen are required by regulation to discard whenever caught, or are required to retain but not sell.

Resilience: The ability of a population or ecosystem to withstand change and to recover from stress (natural or anthropogenic).

Restoration: The transplanting of live organisms from their natural habitat in one area to another area where losses of, or damage to, those organisms has occurred with the purpose of restoring the damaged or otherwise compromised area to its original, or a substantially improved, condition; additionally, the altering of the physical characteristics (e.g., substrate, water quality) of an area that has been changed through human activities to return it as close as possible to its natural state in order to restore habitat for organisms.

Rock: Any consolidated or coherent and relatively hard, naturally formed, mass of mineral matter.

Rod-and-Reel: A hand-held fishing rod with a manually or electrically operated reel attached.

Scuba-assisted Fishing: Fishing, typically by spear or by hand collection, using assisted breathing apparatus.

Secretary: The Secretary of Commerce or a designee.

Sessile: Attached to a substrate; non-motile for all or part of the life cycle.

Slurp Gun: A self-contained, typically hand-held, tube–shaped suction device that captures organisms by rapidly drawing seawater containing the organisms into a closed chamber.

Social Acceptability: The acceptance of the suitability of management measures by stakeholders, taking cultural, traditional, political and individual benefits into account.

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Marine National Monument (MNM): Marine protected area designated by Presidential Proclamation, via the Antiquities Act of 1906.

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Slurp Gun: A self-contained, typically hand-held, tube–shaped suction device that captures organisms by rapidly drawing seawater containing the organisms into a closed chamber.

Social Acceptability: The acceptance of the suitability of management measures by stakeholders, taking cultural, traditional, political and individual benefits into account.

Spear: A sharp, pointed, or barbed instrument on a shaft, operated manually or shot from a gun or sling.

Stock Assessment: An evaluation of a stock in terms of abundance and fishing mortality levels and trends, and relative to fishery management objectives and constraints if they have been specified.

Stock of Fish: A species, subspecies, geographical grouping or other category of fish capable of management as a unit.

Submersible: A manned or unmanned device that functions or operates primarily underwater and is used to harvest fish.

Subsistence Fishing: Fishing to obtain food for personal and/or community use rather than for profit sales or recreation.

Target Resources: Species or taxa sought after in a directed fishery.

Trophic Web: A network that represents the predator/prey interactions of an ecosystem.

Trap: A portable, enclosed, box-like device with one or more entrances used for catching and holding fish or marine organism.

Western Pacific Regional Fishery Management Council (WPRFMC or Coucil): A Regional Fishery Management Council established under the MSA, consisting of the State of Hawaii, the Territory of American Samoa, the Territory of Guam, and the Commonwealth of the Northern Mariana Islands which has authority over the fisheries in the Pacific Ocean seaward of such States, Territories, Commonwealths, and Possessions of the United States in the Pacific Ocean Area. The Council has 13 voting members including eight appointed by the Secretary of Commerce at least one of whom is appointed from each of the following States: Hawaii, the Territories of American Samoa and Guam, and the Commonwealth of the Northern Mariana Islands.

Stock Assessment: An evaluation of a stock in terms of abundance and fishing mortality levels and trends, and relative to fishery management objectives and constraints if they have been specified.

Stock of Fish: A species, subspecies, geographical grouping or other category of fish capable of management as a unit.

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Appendix C: Regulations Implementing the Hawaiian Archipelago Fishery Ecosystem Plan

PART 665—FISHERIES IN THE WESTERN PACIFIC

Contents

AUTHORITY: 16 U.S.C. 1801 *et seq.*

SOURCE: 75 FR 2205, Jan. 14, 2010, unless otherwise noted.

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Subpart A—General

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§665.1 Purpose and scope.

(a) The regulations in this part govern fishing for western Pacific fishery ecosystem MUS by vessels of the United States that operate or are based inside the outer boundary of the U.S. EEZ around American Samoa, Hawaii, Guam, the Northern Mariana Islands, Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, and Wake Island.

(b) General regulations governing fishing by all vessels of the United States and by fishing vessels other than vessels of the United States are contained in 50 CFR part 600.

(c) Regulations governing the harvest, possession, landing, purchase, and sale of shark fins are found in 50 CFR part 600 subpart N.

(d) This subpart contains regulations that are common to all western Pacific fisheries managed under Fishery Ecosystem Plans (FEPs) prepared by the Western Pacific Fishery Management Council under the Magnuson-Stevens Act.

(e) Regulations specific to individual areas and fisheries are included in subparts B through F of this part.

(f) Nothing in subparts B through F of this part is intended to supersede any valid state or Federal regulations that are more restrictive than those published here.

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§665.2 Relation to other laws.

NMFS recognizes that any state law pertaining to vessels registered under the laws of that state while operating in the fisheries regulated under this part, that is consistent with this part and the FEPs implemented by this part, shall continue in effect with respect to fishing activities regulated under this part.

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§665.3 Licensing and registration.

Any person who is required to do so by applicable state law or regulation must comply with licensing and registration requirements in the exact manner required by applicable state law or regulation.

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§665.4 Annual catch limits.

(a) *General.* For each fishing year, the Regional Administrator shall specify an annual catch limit, including any overage adjustments, for each stock or stock complex of management unit species defined in subparts B through F of this part, as recommended by the Council, and considering the best available scientific, commercial, and other information about the fishery for that stock or stock complex. The annual catch limit shall serve as the basis for invoking accountability measures in paragraph (f) of this section.

(b) *Overage adjustments.* If landings of a stock or stock complex exceed the specified annual catch limit in a fishing year, the Council will take action in accordance with 50 CFR 600.310(g), which may include recommending that the Regional Administrator reduce the annual catch limit for the subsequent year by the amount of the overage or other measures, as appropriate.

(c) *Exceptions.* The Regional Administrator is not required to specify an annual catch limit for a management unit species that is statutorily excepted from the requirement pursuant to 50 CFR 600.310(h)(2), or that the Council has identified as an ecosystem component species. The Regional Administrator will publish in the FEDERAL REGISTER the list of ecosystem component species, and will publish any changes to the list, as necessary.

(d) *Annual catch target.* For each fishing year, the Regional Administrator may also specify an annual catch target that is below the annual catch limit of a stock or stock complex, as recommended by the Council. When used, the annual catch target shall serve as the basis for invoking accountability measures in paragraph (f) of this section.

(e) *Procedures and timing.* (1) No later than 60 days before the start of a fishing year, the Council shall recommend to the Regional Administrator an annual catch limit, including any overage adjustment, for each stock or stock complex. The recommended limit should be based on a recommendation of the SSC of the acceptable biological catch for each stock or stock complex. The Council may not recommend an annual catch limit that exceeds the acceptable biological catch recommended by the SSC. The Council may also recommend an annual catch target below the annual catch limit.

(2) No later than 30 days before the start of a fishing year, the Regional Administrator shall publish in the FEDERAL REGISTER a notice of the proposed annual catch limit specification and any associated annual catch target, and request public comment.

(3) No later than the start of a fishing year, the Regional Administrator shall publish in the FEDERAL REGISTER and use other methods to notify permit holders of the final annual catch limit specification and any associated annual catch target.

(f) *Accountability measures.* When any annual catch limit or annual catch target is projected to be reached, based on available information, the Regional Administrator shall publish notification to that effect in the FEDERAL REGISTER and shall use other means to notify permit holders.

(1) The notice will include an advisement that fishing for that stock or stock complex will be restricted beginning on a specified date, which shall not be earlier than 7 days after the date of filing the notice for public inspection at the Office of the Federal Register. The restriction may include, but is not limited to, closure of the fishery, closure of specific areas, changes to bag limits, or restrictions in effort. The restriction will remain in effect until the end of the fishing year, except that the Regional Administrator may, based on a recommendation from the Council, remove or modify the restriction before the end of the fishing year.

(2) It is unlawful for any person to conduct fishing in violation of the restrictions specified in the notification issued pursuant to paragraph (f)(1) of this section.

[76 FR 37286, June 27, 2011]

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§§665.5-665.11 [Reserved]

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§665.12 Definitions.

In addition to the definitions in the Magnuson-Stevens Act, §600.10 of this chapter, and subparts B through F of this part, general definitions for western Pacific fisheries have the following meanings:

American Samoa FEP means the Fishery Ecosystem Plan for American Samoa.

Bottomfish FMP means the Fishery Management Plan for Bottomfish and Seamount Groundfish of the Western Pacific Region established in 1986 and replaced by FEPs.

Carapace length means a measurement in a straight line from the ridge between the two largest spines above the eyes, back to the rear edge of the carapace of a spiny lobster (see Figure 1 to this part).

Circle hook means a fishing hook with the point turned perpendicularly back towards the shank.

Commercial fishing means fishing in which the fish harvested, either in whole or in part, are intended to enter commerce or enter commerce through sale, barter, or trade. All lobster fishing in Crustacean Permit Area 1 is considered commercial fishing.

Commonwealth of the Northern Mariana Islands (CNMI) means the Northern Mariana Islands.

Coral Reef Ecosystems FMP means the Fishery Management Plan for Coral Reef Ecosystems of the Western Pacific Region established in 2004 and replaced by FEPs.

Council means the Western Pacific Fishery Management Council.

Crustacean receiving vessel means a vessel of the United States to which lobsters taken in a crustacean management area are transferred from another vessel.

Crustaceans FMP means the Fishery Management Plan for Crustacean Fisheries of the Western Pacific Region established in 1982 and replaced by FEPs.

Currently harvested coral reef taxa (CHCRT) means coral reef associated species, families, or subfamilies, as defined in §§665.121, 665.221, 665.421, and 665.621, that have annual landings greater than 454.54 kg (1,000 lb) as reported on individual state, commonwealth, or territory catch reports or through creel surveys. Fisheries and research data from many of these species have been analyzed by regional management agencies.

Customary exchange means the non-market exchange of marine resources between fishermen and community residents, including family and friends of community residents, for goods, and/or services for cultural, social, or religious reasons. Customary exchange may include cost recovery through monetary reimbursements and other means for actual trip expenses, including but not limited to ice, bait, fuel, or food, that may be necessary to participate in fisheries in the western Pacific. Actual trip expenses do not include expenses that a fisherman would incur without making a fishing trip, including expenses relating to dock space, vessel mortgage payments, routine vessel maintenance, vessel registration fees, safety equipment required by U.S. Coast Guard, and other incidental costs and expenses normally associated with ownership of a vessel.

Dead coral means any precious coral that no longer has any live coral polyps or tissue.

Ecosystem component species means any western Pacific MUS that the Council has identified to be, generally, a non-target species, not determined to be subject to overfishing, approaching overfished, or overfished, not likely to become subject to overfishing or overfished, and generally not retained for sale or personal use.

EFP means an experimental fishing permit.

First level buyer means:

(1) The first person who purchases, with the intention to resell, management unit species, or portions thereof, that were harvested by a vessel that holds a permit or is otherwise regulated under crustacean fisheries in subparts B through E of this part; or

(2) A person who provides recordkeeping, purchase, or sales assistance in the first transaction involving MUS (such as the services provided by a wholesale auction facility).

Fishing gear, as used in regulations for the American Samoa, CNMI, Hawaii, and PRIA bottomfish fisheries in subparts B through E of this part, includes:

(1) Bottom trawl, which means a trawl in which the otter boards or the footrope of the net are in contact with the sea bed;

(2) Gillnet, (see §600.10);

(3) Hook-and-line, which means one or more hooks attached to one or more lines;

(4) Set net, which means a stationary, buoyed, and anchored gill net; and

(5) Trawl, (see §600.10).

Fishing trip means a period of time during which fishing is conducted, beginning when the vessel leaves port and ending when the vessel lands fish.

Fishing year means the year beginning at 0001 local time on January 1 and ending at 2400 local time on December 31, with the exception of fishing for Hawaii Restricted Bottomfish Species and any precious coral MUS.

Freeboard means the straight line vertical distance between a vessel's working deck and the sea surface. If the vessel does not have gunwale door or stern door that exposes the working deck, freeboard means the straight line vertical distance between the top of a vessel's railing and the sea surface.

Harvest guideline means a specified numerical harvest objective.

Hawaiian Archipelago means the Main and Northwestern Hawaiian Islands, including Midway Atoll.

Hawaii FEP means the Fishery Ecosystem Plan for the Hawaiian Archipelago.

Hookah breather means a tethered underwater breathing device that pumps air from the surface through one or more hoses to divers at depth.

Incidental catch or incidental species means species caught while fishing for the primary purpose of catching a different species.

Land or landing means offloading fish from a fishing vessel, arriving in port to begin offloading fish, or causing fish to be offloaded from a fishing vessel.

Large vessel means, as used in this part, any vessel equal to or greater than 50 ft (15.2 m) in length overall.

Length overall (LOA) or length of a vessel as used in this part, means the horizontal distance, rounded to the nearest foot (with any 0.5 foot or 0.15 meter fraction rounded upward), between the foremost part of the stem and the aftermost part of the stern, excluding bowsprits, rudders, outboard motor brackets, and similar fittings or attachments (see Figure 2 to this part). “Stem” is the foremost part of the vessel, consisting of a section of timber or fiberglass, or cast forged or rolled metal, to which the sides of the vessel are united at the fore end, with the lower end united to the keel, and with the bowsprit, if one is present, resting on the upper end. “Stern” is the aftermost part of the vessel.

Live coral means any precious coral that has live coral polyps or tissue.

Live rock means any natural, hard substrate, including dead coral or rock, to which is attached, or which supports, any living marine life form associated with coral reefs.

Low-use marine protected area (MPA) means an area of the U.S. EEZ where fishing operations have specific restrictions in order to protect the coral reef ecosystem, as specified under area restrictions in subparts B through F of this part.

Main Hawaiian Islands (MHI) means the islands of the Hawaii Archipelago lying to the east of 161° W. long.

Mariana Archipelago means Guam and the Northern Mariana Islands.

Mariana FEP means the Fishery Ecosystem Plan for the Mariana Archipelago.

Medium vessel, as used in this part, means any vessel equal to or more than 40 ft (12.2 m) and less than 50 ft (15.2 m) LOA.

Non-commercial fishing means fishing that does not meet the definition of commercial fishing in the Magnuson-Stevens Fishery Conservation and Management Act, and includes, but is not limited to, sustenance, subsistence, traditional indigenous, and recreational fishing.

Non-precious coral means any species of coral other than those listed under the definitions for precious coral in §§665.161, 665.261, 665.461, and 665.661.

Non-selective gear means any gear used for harvesting coral that cannot discriminate or differentiate between types, size, quality, or characteristics of living or dead coral.

Northwestern Hawaiian Islands (NWHI) means the islands of the Hawaiian Archipelago lying to the west of 161° W. long.

No-take MPA means an area of the U.S. EEZ that is closed to fishing for or harvesting of any MUS, as defined in subparts B through F of this part.

Offload means to remove MUS from a vessel.

Offset circle hook means a circle hook in which the barbed end of the hook is displaced relative to the parallel plane of the eyed end, or shank, of the hook when laid on its side.

Owner, as used in the regulations for the crustacean fisheries in subparts B through E of this part and §665.203(i) and (j), means a person who is identified as the current owner of the vessel as described in the Certificate of Documentation (Form CG-1270) issued by the United States Coast Guard (USCG) for a documented vessel, or in a registration certificate issued by a state, a territory, or the USCG for an undocumented vessel. As used in the regulations for the precious coral fisheries in subparts B through E of this part and §665.203(c) through (h), the definition of “owner” in §600.10 of this chapter continues to apply.

Pacific Islands Regional Office (PIRO) means the headquarters of the Pacific Islands Region, NMFS, located at 1845 Wasp Blvd., Bldg. 176, Honolulu, HI 96818; telephone number: 808-725-5000.

Pacific remote island areas (PRIA, or U.S. island possessions in the Pacific Ocean) means Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, Wake Island, and Midway Atoll.

Pelagics FEP means the Fishery Ecosystem Plan for Pacific Pelagic Fisheries of the Western Pacific Region.

Pelagics FMP means the Fishery Management Plan for Pelagic Fisheries of the Western Pacific Region that was established in 1987 and replaced by the western Pacific pelagic FEP.

Potentially harvested coral reef taxa (PHCRT) means coral reef associated species, families, or subfamilies, as defined in §§665.121, 665.221, 665.421, and 665.621, for which little or no information is available beyond general taxonomic and distribution descriptions. These species have either not been caught in the past or have been harvested annually in amounts less than 454.54 kg (1,000 lb).

Precious Corals FMP means the Fishery Management Plan for Precious Corals of the Western Pacific Region established in 1983 and replaced by fishery ecosystem plans (FEPs).

PRIA FEP means the Fishery Ecosystem Plan for the Pacific Remote Island Areas of Palmyra Atoll, Kingman Reef, Jarvis Island, Baker Island, Howland Island, Johnston Atoll, and Wake Island.

Protected species means an animal protected under the MMPA, as amended, listed under the ESA, as amended, or subject to the Migratory Bird Treaty Act, as amended.

Receiving vessel means a vessel that receives fish or fish products from a fishing vessel, and with regard to a vessel holding a permit under §665.801(e), that also lands western Pacific pelagic MUS taken by other vessels using longline gear.

Recreational fishing means fishing conducted for sport or pleasure, including charter fishing.

Regional Administrator means Regional Administrator, Pacific Islands Region, NMFS (see Table 1 of §600.502 of this chapter for address).

Selective gear means any gear used for harvesting coral that can discriminate or differentiate between type, size, quality, or characteristics of living or dead coral.

Special Agent-In-Charge (SAC) means the Special Agent-In-Charge, NMFS, Pacific Islands Enforcement Division, located at 1845 Wasp Blvd., Bldg. 176, Honolulu, HI 96818; telephone number: 808-725-6100, or a designee.

Special permit means a permit issued to allow fishing for coral reef ecosystem MUS in low-use MPAs or to fish for any PHCRT.

SSC means the Scientific and Statistical Committee of the Western Pacific Fishery Management Council.

State of Hawaii commercial marine license means the license required by the State of Hawaii for anyone to take marine life for commercial purposes (also known as the commercial fishing license).

Transship means to offload or otherwise transfer MUS or products thereof to a receiving vessel.

Trap means a box-like device used for catching and holding lobsters or fish.

U.S. harvested coral means coral caught, taken, or harvested by vessels of the United States within any fishery for which an FMP or FEP has been implemented under the Magnuson-Stevens Act.

Vessel monitoring system unit (VMS unit) means the hardware and software owned by NMFS, installed on vessels by NMFS, and required to track and transmit the positions of certain vessels.

Western Pacific fishery management area means those waters shoreward of the outer boundary of the EEZ around American Samoa, Guam, Hawaii, CNMI, Midway, Johnston and Palmyra Atolls, Kingman Reef, and Wake, Jarvis, Baker, and Howland Islands.

[75 FR 2205, Jan. 14, 2010, as amended at 76 FR 37286, June 27, 2011; 78 FR 33003, June 3, 2013; 79 FR 64111, Oct. 28, 2014]

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§665.13 Permits and fees.

(a) *Applicability.* The requirements for permits for specific western Pacific fisheries are set forth in subparts B through I of this part.

(b) *Validity.* Each permit is valid for fishing only in the specific fishery management areas identified on the permit.

(c) *Application.* (1) An application for a permit to operate in a Federal western Pacific fishery that requires a permit and is regulated under subparts B through I of this part may be obtained from NMFS PIRO. The completed application must be submitted to PIRO for consideration. In no case shall PIRO accept an application that is not on a Federal western Pacific fisheries permit application form.

(2) A minimum of 15 days after the day PIRO receives a complete application should be allowed for processing the application for fisheries under subparts B through I of this part. If an incomplete or improperly completed application is filed, NMFS will notify the applicant of the deficiency. If the applicant fails to correct the deficiency within 30 days following the date of the letter of notification of deficiency, the application will be administratively closed.

(d) *Change in application information.* Any change in the permit application information or vessel documentation, submitted under paragraph (c) of this section, must be reported to PIRO in writing within 15 days of the change to avoid a delay in processing the permit application. A minimum of 10 days from the day the information is received by PIRO should be given for PIRO to record any change in information from the permit application submitted under paragraph (c) of this section. Failure to report such changes may result in a delay in processing an application, permit holders failing to receive important notifications, or sanctions pursuant to the Magnuson-Stevens Act at 16 U.S.C. 1858(g) or 15 CFR part 904, subpart D.

(e) *Issuance.* After receiving a complete application submitted under paragraph (c) of this section, the Regional Administrator will issue a permit to an applicant who is eligible under this part, as appropriate.

(f) *Fees.* (1) PIRO will not charge a fee for a permit issued under §§665.142, 665.162, 665.242, 665.262, 665.442, 665.462, 665.642, or 665.662 of this part, for a Ho'omalu limited access permit issued under §665.203, or for a Guam bottomfish permit issued under §665.404.

(2) PIRO will charge a non-refundable processing fee for each application (including transfer and renewal) for each permit listed in paragraphs (f)(2)(i) through (f)(2)(xiii) of this section. The amount of the fee is calculated in accordance with the procedures of the NOAA Finance Handbook for determining the administrative costs incurred in processing the permit. The fee may not exceed such costs. The appropriate fee is specified with each application form and must accompany each application. Failure to pay the fee will preclude the issuance, transfer, or renewal of any of the following permits:

(i) Hawaii longline limited access permit.

(ii) Mau Zone limited access permit.

(iii) Coral reef ecosystem special permit.

(iv) American Samoa longline limited access permit.

(v) MHI non-commercial bottomfish permit.

(vi) Western Pacific squid jig permit.

(vii) Crustacean permit.

(viii) CNMI commercial bottomfish permit.

(ix) Marianas Trench Monument non-commercial permit.

(x) Marianas Trench Monument recreational charter permit.

(xi) Pacific Remote Islands Monument recreational charter permit.

(xii) Rose Atoll Monument non-commercial permit.

(xiii) Rose Atoll Monument recreational charter permit.

(g) *Expiration.* A permit issued under subparts B through I of this part is valid for the period specified on the permit unless revoked, suspended, transferred, or modified under 15 CFR part 904.

(h) *Replacement.* Replacement permits may be issued, without charge, to replace lost or mutilated permits. An application for a replacement permit is not considered a new application.

(i) *Transfer.* An application for a permit transfer under §§665.203(d), 665.242(e), or 665.801(k), or for registration of a permit for use with a replacement vessel under §665.203(i), must be submitted to PIRO as described in paragraph (c) of this section.

(j) *Alteration.* Any permit that has been altered, erased, or mutilated is invalid.

(k) *Display.* Any permit issued under this subpart, or a facsimile of such permit, must be on board the vessel at all times while the vessel is fishing for, taking, retaining, possessing, or landing MUS shoreward of the outer boundary of the fishery management area. Any permit issued under this section must be displayed for inspection upon request of an authorized officer.

(l) *Sanctions.* Procedures governing sanctions and denials are found at subpart D of 15 CFR part 904.

(m) *Permit appeals.* Procedures for appeals of permitting and administrative actions are specified in the relevant subparts of this part.

[75 FR 2205, Jan. 14, 2010, as amended at 78 FR 33003, June 3, 2013; 78 FR 39583, July 2, 2013]

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§665.14 Reporting and recordkeeping.

(a) Except for precious coral and crustacean fisheries, any person who is required to do so by applicable state law or regulation must make and/or file all reports of MUS landings containing all data and in the exact manner required by applicable state law or regulation.

(b) *Fishing record forms*—(1) *Applicability.* (i) The operator of a fishing vessel subject to the requirements of §§665.124, 665.142, 665.162, 665.203(a)(2), 665.224, 665.242, 665.262, 665.404, 665.424, 665.442, 665.462, 665.603, 665.624, 665.642, 665.662, 665.801, 665.905, 665.935, or 665.965 must maintain on board the vessel an accurate and complete record of catch, effort, and other data on paper report forms provided by the Regional Administrator, or electronically as specified and approved by the Regional Administrator, except as allowed in paragraph (b)(1)(iii) of this section.

(ii) All information specified by the Regional Administrator must be recorded on paper or electronically within 24 hours after the completion of each fishing day. The logbook information, reported

on paper or electronically, for each day of the fishing trip must be signed and dated or otherwise authenticated by the vessel operator in the manner determined by the Regional Administrator, and be submitted or transmitted via an approved method as specified by the Regional Administrator, and as required by this paragraph (b).

(iii) In lieu of the requirements in paragraph (a)(1)(i) of this section, the operator of a fishing vessel registered for use under a Western Pacific squid jig permit pursuant to the requirements of §665.801(g) may participate in a state reporting system. If participating in a state reporting system, all required information must be recorded and submitted in the exact manner required by applicable state law or regulation.

(2) *Timeliness of submission.* (i) If fishing was authorized under a permit pursuant to §§665.142, 665.242, 665.442, 665.404, 665.162, 665.262, 665.462, 665.662, or 665.801, the vessel operator must submit the original logbook information for each day of the fishing trip to the Regional Administrator within 72 hours of the end of each fishing trip, except as allowed in paragraph (iii) of this section.

(ii) If fishing was authorized under a permit pursuant to §665.203(a)(2), the vessel operator or vessel owner must submit the original logbook form for each day of the fishing trip to the Regional Administrator within 72 hours of the end of each fishing trip.

(iii) If fishing was authorized under a PRIA bottomfish permit pursuant to §665.603(a), PRIA pelagic troll and handline permit pursuant to §665.801(f), crustacean fishing permit for the PRIA (Permit Area 4) pursuant to §665.642(a), or a precious coral fishing permit for Permit Area X-P-PI pursuant to §665.662, the original logbook form for each day of fishing within EEZ waters around the PRIA must be submitted to the Regional Administrator within 30 days of the end of each fishing trip.

(iv) If fishing was authorized under a permit pursuant to §§665.124, 665.224, 665.424, 665.624, 665.905, 665.935, or 665.965, the original logbook information for each day of fishing must be submitted to the Regional Administrator within 30 days of the end of each fishing trip.

(c) *Transshipment logbooks.* Any person subject to the requirements of §§665.124(a)(2), 665.224(a)(2), 665.424(a)(2), 665.624(a)(2), or 665.801(e) must maintain on board the vessel an accurate and complete NMFS transshipment logbook containing report forms provided by the Regional Administrator. All information specified on the forms must be recorded on the forms within 24 hours after the day of transshipment. Each form must be signed and dated by the receiving vessel operator. The original logbook for each day of transshipment activity must be submitted to the Regional Administrator within 72 hours of each landing of western Pacific pelagic MUS. The original logbook for each day of transshipment activity must be submitted to the Regional Administrator within 7 days of each landing of coral reef ecosystem MUS.

(d) *Sales report.* The operator of any fishing vessel subject to the requirements of §§665.142, 665.242, 665.442, or 665.642, or the owner of a medium or large fishing vessel subject to the requirements of §665.404(a)(2) must submit to the Regional Administrator, within 72 hours of offloading of crustacean MUS, an accurate and complete sales report on a form provided by the Regional Administrator. The form must be signed and dated by the fishing vessel operator.

(e) *Packing or weigh-out slips.* The operator of any fishing vessel subject to the requirements of §§665.142, 665.242, 665.442, or 665.642 must attach packing or weighout slips provided to the operator by the first-level buyer(s), unless the packing or weighout slips have not been provided in time by the buyer(s).

(f) *Modification of reporting and recordkeeping requirements.* The Regional Administrator may, after consultation with the Council, initiate rulemaking to modify the information to be provided on the fishing

record forms, transshipment logbook, and sales report forms and timeliness by which the information is to be provided, including the submission of packing or weighout slips.

(g) *Availability of records for inspection.* (1) Western Pacific pelagic MUS. Upon request, any fish dealer must immediately provide an authorized officer access to inspect and copy all records of purchases, sales, or other transactions involving western Pacific pelagic MUS taken or handled by longline vessels that have permits issued under this subpart or that are otherwise subject to subpart F of this part, including, but not limited to, information concerning:

(i) The name of the vessel involved in each transaction and the owner and operator of the vessel.

(ii) The weight, number, and size of each species of fish involved in each transaction.

(iii) Prices paid by the buyer and proceeds to the seller in each transaction.

(2) *Crustacean MUS.* Upon request, any first-level buyer must immediately allow an authorized officer and any employee of NMFS designated by the Regional Administrator, to access, inspect, and copy all records relating to the harvest, sale, or transfer of crustacean MUS taken by vessels that have permits issued under this subpart or §§665.140 through 665.145, 665.240 through 665.252, 665.440 through 665.445, or 665.640 through 665.645 of this part. This requirement may be met by furnishing the information on a worksheet provided by the Regional Administrator. The information must include, but is not limited to:

(i) The name of the vessel involved in each transaction and the owner or operator of the vessel.

(ii) The amount, number, and size of each MUS involved in each transaction.

(iii) Prices paid by the buyer and proceeds to the seller in each transaction.

(3) Bottomfish and seamount groundfish MUS. Any person who is required by state laws and regulations to maintain records of landings and sales for vessels regulated by this subpart and by §§665.100 through 665.105, 665.200 through 665.212, 665.400 through 665.407, and 665.600 through 665.606 of this part must make those records immediately available for Federal inspection and copying upon request by an authorized officer.

(4) *Coral reef ecosystem MUS.* Any person who has a special permit and who is required by state laws and regulations to maintain and submit records of catch and effort, landings and sales for coral reef ecosystem MUS by this subpart and §§665.120 through 665.128, 665.220 through 665.228, 665.420 through 665.428, or 665.620 through 665.628 of this part must make those records immediately available for Federal inspection and copying upon request by an authorized officer as defined in §600.10 of this chapter.

(h) *State reporting.* Any person who has a permit under §§665.124, 665.203, 665.224, 665.404, 665.424, 665.603, or 665.624 and who is regulated by state laws and regulations to maintain and submit records of catch and effort, landings and sales for vessels regulated by subparts B through F of this part must maintain and submit those records in the exact manner required by state laws and regulations.

[75 FR 2205, Jan. 14, 2010, as amended at 78 FR 33003, June 3, 2013; 78 FR 39583, July 2, 2013]

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§665.15 Prohibitions.

In addition to the prohibitions in §600.725 of this chapter, it is unlawful for any person to:

(a) Engage in fishing without a valid permit or facsimile of a valid permit on board the vessel and available for inspection by an authorized officer, when a permit is required under §§665.13 or 665.17, unless the vessel was at sea when the permit was issued under §665.13, in which case the permit must be on board the vessel before its next trip.

(b) File false information on any application for a fishing permit under §665.13 or an EFP under §665.17.

(c) Fail to file reports in the exact manner required by any state law or regulation, as required in §665.14.

(d) Falsify or fail to make, keep, maintain, or submit any logbook or logbook form or other record or report required under §§665.14 and 665.17.

(e) Refuse to make available to an authorized officer or a designee of the Regional Administrator for inspection or copying, any records that must be made available in accordance with §665.14.

(f) Fail to affix or maintain vessel or gear markings, as required by §§665.16, 665.128, 665.228, 665.246, 665.428, 665.628, or 665.804.

(g) Violate a term or condition of an EFP issued under §665.17.

(h) Fail to report any take of or interaction with protected species as required by §665.17(k).

(i) Fish without an observer on board the vessel after the owner or agent of the owner has been directed by NMFS to make accommodations available for an observer under §§665.17, 665.105, 665.145, 665.207, 665.247, 665.407, 665.445, 665.606, 665.645, or 665.808.

(j) Refuse to make accommodations available for an observer when so directed by the Regional Administrator under §§665.105, 665.145, 665.207, 665.247, 665.407, 665.445, 665.606, 665.645, or 665.808, or under any provision in an EFP issued under §665.17.

(k) Fail to notify officials as required in §§665.126, 665.144, 665.205, 665.226, 665.244, 665.426, 665.444, 665.626, 665.644, 665.803, or 665.808.

(l) Fish for, take or retain within a no-take MPA, defined in §§665.99, 665.199, 665.399, or 665.599, any bottomfish MUS, crustacean MUS, western Pacific pelagic MUS, precious coral, seamount groundfish or coral reef ecosystem MUS.

(m) Fail to comply with a term or condition governing the vessel monitoring system in violation of §665.19.

(n) Fish for, catch, or harvest MUS without an operational VMS unit on board the vessel after installation of the VMS unit by NMFS, in violation of §665.19(e)(2).

(o) Possess MUS, that were harvested after NMFS has installed the VMS unit on the vessel, on board that vessel without an operational VMS unit, in violation of §665.19(e)(2).

(p) Interfere with, tamper with, alter, damage, disable, or impede the operation of a VMS unit or attempt any of the same; or move or remove a VMS unit without the prior permission of the SAC in violation of §665.19(e)(3).

(q) Make a false statement, oral or written, to an authorized officer, regarding the use, operation, or maintenance of a VMS unit, in violation of §665.19(e).

(r) Interfere with, impede, delay, or prevent the installation, maintenance, repair, inspection, or removal of a VMS unit, in violation of §665.19(e).

(s) Interfere with, impede, delay, or prevent access to a VMS unit by a NMFS observer, in violation of §665.808(f)(4).

(t) Connect or leave connected additional equipment to a VMS unit without the prior approval of the SAC, in violation of §665.19(f).

(u) Fail to comply with the restrictions specified in the notification issued pursuant to §665.4(f)(1), in violation of §665.15(f)(2).

[75 FR 2205, Jan. 14, 2010, as amended at 76 FR 37287, June 27, 2011]

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§665.16 Vessel identification.

(a) Applicability. Each fishing vessel subject to this part, except those identified in paragraph (e) of this section, must be marked for identification purposes, as follows:

(1) A vessel that is registered for use with a valid permit issued under §665.801 and used to fish on the high seas within the Convention Area as defined in §300.211 of this title must be marked in accordance with the requirements at §§300.14 and 300.217 of this title.

(2) A vessel that is registered for use with a valid permit issued under §665.801 of this part and not used to fish on the high seas within the Convention Area must be marked in accordance with either:

(i) Sections 300.14 and 300.217 of this title, or

(ii) Paragraph (b) of this section.

(3) A vessel that is registered for use with a valid permit issued under subparts B through E and subparts G through I of this part must be marked in accordance with paragraph (b) of this section.

(b) Identification. Each vessel subject to this section must be marked as follows:

(1) The vessel's official number must be affixed to the port and starboard sides of the deckhouse or hull, and on an appropriate weather deck, so as to be visible from enforcement vessels and aircraft. Marking must be legible and of a color that contrasts with the background.

(2) For fishing and receiving vessels of 65 ft (19.8 m) LOA or longer, the official number must be displayed in block Arabic numerals at least 18 inches (45.7 cm) in height, except that vessels in precious coral fisheries that are 65 ft (19.8 m) LOA or longer must be marked in block Arabic numerals at least 14 inches (35.6 cm) in height.

(3) For all other vessels, the official number must be displayed in block Arabic numerals at least 10 inches (25.4 cm) in height.

(c) The vessel operator must ensure that the official number is clearly legible and in good repair.

(d) The vessel operator must ensure that no part of the vessel, its rigging, or its fishing gear obstructs the view of the official number from an enforcement vessel or aircraft.

(e) The following fishing vessels are exempt from the vessel identification requirements in this section:

(1) A vessel registered for use under a MHI non-commercial bottomfish permit that is in compliance with State of Hawaii bottomfish vessel registration and marking requirements.

(2) A vessel less than 40 ft (12.2 m) LOA registered for use under a CNMI commercial bottomfish permit that is in compliance with CNMI bottomfish vessel registration and marking requirements.

[75 FR 2205, Jan. 14, 2010, as amended at 75 FR 3417, Jan. 21, 2010; 78 FR 33003, June 3, 2013; 78 FR 39583, July 2, 2013]

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§665.17 Experimental fishing.

(a) *General.* The Regional Administrator may authorize, for limited purposes, the direct or incidental harvest of MUS that would otherwise be prohibited by this part. No experimental fishing may be conducted unless authorized by an EFP issued by the Regional Administrator in accordance with the criteria and procedures specified in this section. EFPs will be issued without charge.

(b) *Observers.* No experimental fishing for crustacean MUS may be conducted unless a NMFS observer is aboard the vessel.

(c) *Application.* An applicant for an EFP must submit to the Regional Administrator at least 60 days before the desired date of the EFP a written application including, but not limited to, the following information:

(1) The date of the application.

(2) The applicant's name, mailing address, and telephone number.

(3) A statement of the purposes and goals of the experiment for which an EFP is needed, including a general description of the arrangements for disposition of all species harvested under the EFP.

(4) A statement of whether the proposed experimental fishing has broader significance than the applicant's individual goals.

(5) For each vessel to be covered by the EFP:

(i) Vessel name.

(ii) Name, address, and telephone number of owner and operator.

(iii) USCG documentation, state license, or registration number.

(iv) Home port.

(v) Length of vessel.

(vi) Net tonnage.

(vii) Gross tonnage.

(6) A description of the species (directed and incidental) to be harvested under the EFP and the amount of such harvest necessary to conduct the experiment.

(7) For each vessel covered by the EFP, the approximate times and places fishing will take place, and the type, size, and amount of gear to be used.

(8) The signature of the applicant.

(d) *Incomplete applications.* The Regional Administrator may request from an applicant additional information necessary to make the determinations required under this section. An applicant will be notified of an incomplete application within 10 working days of receipt of the application. An incomplete application will not be considered until corrected in writing.

(e) *Issuance.* (1) If an application contains all of the required information, NMFS will publish a notice of receipt of the application in the FEDERAL REGISTER with a brief description of the proposal and will give interested persons an opportunity to comment. The Regional Administrator will also forward copies of the application to the Council, the USCG, and the fishery management agency of the affected state, accompanied by the following information:

(i) The current utilization of domestic annual harvesting and processing capacity (including existing experimental harvesting, if any) of the directed and incidental species for which an EFP is being requested.

(ii) A citation of the regulation or regulations that, without the EFP, would prohibit the proposed activity.

(iii) Biological information relevant to the proposal.

(2) At a Council meeting following receipt of a complete application, the Regional Administrator will consult with the Council and the Director of the affected state fishery management agency concerning the permit application. The applicant will be notified in advance of the meeting at which the application will be considered, and invited to appear in support of the application, if the applicant desires.

(3) Within 5 working days after the consultation in paragraph (e)(2) of this section, or as soon as practicable thereafter, NMFS will notify the applicant in writing of the decision to grant or deny the EFP and, if denied, the reasons for the denial. Grounds for denial of an EFP include, but are not limited to, the following:

(i) The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his or her application.

(ii) According to the best scientific information available, the harvest to be conducted under the permit would detrimentally affect any species of fish in a significant way.

(iii) Issuance of the EFP would inequitably allocate fishing privileges among domestic fishermen or would have economic allocation as its sole purpose.

(iv) Activities to be conducted under the EFP would be inconsistent with the intent of this section or the management objectives of the FEP.

(v) The applicant has failed to demonstrate a valid justification for the permit.

(vi) The activity proposed under the EFP would create a significant enforcement problem.

(4) The decision to grant or deny an EFP is final and unappealable. If the permit is granted, NMFS will publish a notice in the FEDERAL REGISTER describing the experimental fishing to be conducted under the EFP. The Regional Administrator may attach terms and conditions to the EFP consistent with the purpose of the experiment including, but not limited to:

(i) The maximum amount of each species that can be harvested and landed during the term of the EFP, including trip limits, where appropriate.

(ii) The number, sizes, names, and identification numbers of the vessels authorized to conduct fishing activities under the EFP.

(iii) The times and places where experimental fishing may be conducted.

(iv) The type, size, and amount of gear which may be used by each vessel operated under the EFP.

(v) The condition that observers be carried aboard vessels operating under an EFP.

(vi) Data reporting requirements.

(vii) Such other conditions as may be necessary to assure compliance with the purposes of the EFP consistent with the objectives of the FEP.

(f) *Duration.* Unless otherwise specified in the EFP or a superseding notice or regulation, an EFP is effective for no longer than one (1) year from the date of issuance, unless revoked, suspended, or modified. EFPs may be renewed following the application procedures in this section.

(g) *Alteration.* Any EFP that has been altered, erased, or mutilated is invalid.

(h) *Transfer.* EFPs issued under subparts B through F of this part are not transferable or assignable. An EFP is valid only for the vessel(s) for which it is issued.

(i) *Inspection.* Any EFP issued under subparts B through F of this part must be carried aboard the vessel(s) for which it was issued. The EFP must be presented for inspection upon request of any authorized officer.

(j) *Sanctions.* Failure of the holder of an EFP to comply with the terms and conditions of an EFP, the provisions of subparts A through F of this part, any other applicable provision of this part, the Magnuson-Stevens Act, or any other regulation promulgated thereunder, is grounds for revocation, suspension, or modification of the EFP with respect to all persons and vessels conducting activities under the EFP. Any

action taken to revoke, suspend, or modify an EFP will be governed by 15 CFR part 904 subpart D. Other sanctions available under the statute will be applicable.

(k) *Protected species.* Persons fishing under an EFP must report any incidental take or fisheries interaction with protected species on a form provided for that purpose. Reports must be submitted to the Regional Administrator within 3 days of arriving in port.

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§665.18 Framework adjustments to management measures.

Framework measures described below for each specific fishery are valid for all management areas, except where specifically noted in this section.

(a) *Pelagic measures*—(1) *Introduction.* Adjustments in management measures may be made through rulemaking if new information demonstrates that there are biological, social, or economic concerns in the fishery. The following framework process authorizes the implementation of measures that may affect the operation of the fisheries, gear, harvest guidelines, or changes in catch and/or effort.

(2) *Annual report.* By June 30 of each year, the Council-appointed pelagics monitoring team will prepare an annual report on the fisheries in the management area. The report shall contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

(3) *Procedure for established measures.* (i) Established measures are regulations for which the impacts have been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council may recommend to the Regional Administrator that established measures be modified, removed, or reinstituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(4) *Procedure for new measures.* (i) New measures are regulations for which the impacts have not been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council will publicize, including by FEDERAL REGISTER notice, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a FEDERAL REGISTER notice summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(b) *Crustacean measures*—(1) *Introduction.* New management measures may be added through rulemaking if new information demonstrates that there are biological, social, or economic concerns in Permit Areas 1, 2, or 3. The following framework process authorizes the implementation of measures that may affect the operation of the fisheries, gear, harvest guidelines, or changes in catch and/or effort.

(2) *Annual report.* By June 30 of each year, the Council-appointed team will prepare an annual report on the fisheries in the management area. The report shall contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

(3) *Procedure for established measures.* (i) Established measures are regulations for which the impacts have been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council may recommend to the Regional Administrator that established measures be modified, removed, or reinstituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(4) *Procedure for new measures.* (i) New measures are regulations for which the impacts have not been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council will publicize, including by a FEDERAL REGISTER document, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a FEDERAL REGISTER document summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(c) *Bottomfish measures*—(1) *Annual reports.* By June 30 of each year, a Council-appointed bottomfish monitoring team will prepare an annual report on the fishery by area covering the following topics:

(i) Fishery performance data.

(ii) Summary of recent research and survey results.

(iii) Habitat conditions and recent alterations.

(iv) Enforcement activities and problems.

(v) Administrative actions (*e.g.,* data collection and reporting, permits).

(vi) State and territorial management actions.

(vii) Assessment of need for Council action (including biological, economic, social, enforcement, administrative, and state/Federal needs, problems, and trends). Indications of potential problems warranting further investigation may be signaled by the following indicator criteria:

(A) Mean size of the catch of any species in any area is a pre-reproductive size.

(B) Ratio of fishing mortality to natural mortality for any species.

(C) Harvest capacity of the existing fleet and/or annual landings exceed best estimate of MSY in any area.

(D) Significant decline (50 percent or more) in bottomfish catch per unit of effort from baseline levels.

(E) Substantial decline in ex-vessel revenue relative to baseline levels.

(F) Significant shift in the relative proportions of gear in any one area.

(G) Significant change in the frozen/fresh components of the bottomfish catch.

(H) Entry/exit of fishermen in any area.

(I) Per-trip costs for bottomfish fishing exceed per-trip revenues for a significant percentage of trips.

(J) Significant decline or increase in total bottomfish landings in any area.

(K) Change in species composition of the bottomfish catch in any area.

(L) Research results.

(M) Habitat degradation or environmental problems.

(N) Reported interactions between bottomfish fishing operations and protected species in the NWHI.

(viii) Recommendations for Council action.

(ix) Estimated impacts of recommended action.

(2) *Recommendation of management action.* (i) The team may present management recommendations to the Council at any time. Recommendations may cover actions suggested for Federal regulations, state/territorial action, enforcement or administrative elements, and research and data collection. Recommendations will include an assessment of urgency and the effects of not taking action.

(ii) The Council will evaluate the team's reports and recommendations, and the indicators of concern. The Council will assess the need for one or more of the following types of management action: Catch limits, size limits, closures, effort limitations, access limitations, or other measures.

(iii) The Council may recommend management action by either the state/territorial governments or by Federal regulation.

(3) *Federal management action.* (i) If the Council believes that management action should be considered, it will make specific recommendations to the Regional Administrator after requesting and considering the views of its Scientific and Statistical Committee and Bottomfish Advisory Panel and obtaining public comments at a public hearing.

(ii) The Regional Administrator will consider the Council's recommendation and accompanying data, and, if he or she concurs with the Council's recommendation, will propose regulations to carry out the action. If the Regional Administrator rejects the Council's proposed action, a written explanation for the denial will be provided to the Council within 2 weeks of the decision.

(iii) The Council may appeal a denial by writing to the Assistant Administrator, who must respond in writing within 30 days.

(iv) The Regional Administrator and the Assistant Administrator will make their decisions in accord with the Magnuson-Stevens Act, other applicable law, and the bottomfish measures of the FEPs.

(v) To minimize conflicts between the Federal and state management systems, the Council will use the procedures in paragraph (c)(2) of this section to respond to state/territorial management actions.

Council consideration of action would normally begin with a representative of the state or territorial government bringing a potential or actual management conflict or need to the Council's attention.

(4) *Access limitation procedures.* (i) Access limitation may be adopted under this paragraph (c)(4) only for the NWHI, American Samoa, and Guam.

(ii) If access limitation is proposed for adoption or subsequent modification through the process described in this paragraph (c)(4), the following requirements must be met:

(A) The bottomfish monitoring team must consider and report to the Council on present participation in the fishery; historical fishing practices in, and dependence on, the fishery; economics of the fishery; capability of fishing vessels used in the fishery to engage in other fisheries; cultural and social framework relevant to the fishery; and any other relevant considerations.

(B) Public hearings must be held specifically addressing the limited access proposals.

(C) A specific advisory subpanel of persons experienced in the fishing industry will be created to advise the Council and the Regional Administrator on administrative decisions.

(D) The Council's recommendation to the Regional Administrator must be approved by a two-thirds majority of the voting members.

(5) *Five-year review.* The Council will conduct a comprehensive review on the effectiveness of the Mau Zone limited access program 5 years following implementation of the program. The Council will consider the extent to which the FEP objectives have been met and verify that the target number of vessels established for the fishery is appropriate for current fishing activity levels, catch rates, and biological condition of the stocks. The Council may establish a new target number based on the 5-year review.

(d) *Precious coral measures*—(1) *Introduction.* Established management measures may be revised and new management measures may be established and/or revised through rulemaking if new information demonstrates that there are biological, social, or economic concerns in a precious coral permit area. The following framework process authorizes the implementation of measures that may affect the operation of the fisheries, gear, quotas, season, or levels of catch and/or in effort.

(2) *Annual report.* By June 30 of each year, the Council-appointed precious coral team will prepare an annual report on the fisheries in the management area. The report will contain, among other things, recommendations for Council action and an assessment of the urgency and effects of such action(s).

(3) *Procedure for established measures.* (i) Established measures are regulations for which the impacts have been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council may recommend to the Regional Administrator that established measures be modified, removed, or reinstituted. Such recommendation will include supporting rationale and analysis and will be made after advance public notice, public discussion, and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(4) *Procedure for new measures.* (i) New measures are regulations for which the impacts have not been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council will publicize, including by a FEDERAL REGISTER document, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is

discussed, the Council will consider recommendations and prepare a FEDERAL REGISTER document summarizing the Council's deliberations, rationale, and analysis for the preferred action and the time and place for any subsequent Council meeting(s) to consider the new measure. At a subsequent public meeting, the Council will consider public comments and other information received before making a recommendation to the Regional Administrator about any new measure. If approved by the Regional Administrator, NMFS may implement the Council's recommendation by rulemaking.

(e) *Coral reef ecosystem measures*—(1) *Procedure for established measures.* (i) Established measures are regulations for which the impacts have been evaluated in Council or NMFS documents in the context of current conditions.

(ii) The Council may recommend to the Regional Administrator that established measures be modified, removed, or reinstituted. Such recommendation shall include supporting rationale and analysis, and shall be made after advance public notice, public discussion and consideration of public comment. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(2) *Procedure for new measures.* (i) New measures are regulations for which the impacts have not been evaluated in Council or NMFS documents in the context of current conditions. New measures include, but are not limited to, catch limits, resource size limits, closures, effort limitations, reporting and recordkeeping requirements.

(ii) The Regional Administrator will publicize, including by FEDERAL REGISTER notice, and solicit public comment on, any proposed new management measure. After a Council meeting at which the measure is discussed, the Council will consider recommendations and prepare a document summarizing the Council's deliberations, rationale, and analysis for the preferred action, and the time and place for any subsequent Council meeting(s) to consider the new measure. At subsequent public meeting(s), the Council will consider public comments and other information received to make a recommendation to the Regional Administrator about any new measure. NMFS may implement the Council's recommendation by rulemaking if approved by the Regional Administrator.

(A) The Regional Administrator will consider the Council's recommendation and supporting rationale and analysis, and, if the Regional Administrator concurs with the Council's recommendation, will propose regulations to carry out the action. If the Regional Administrator rejects the Council's proposed action, the Regional Administrator will provide a written explanation for the denial within 2 weeks of the decision.

(B) The Council may appeal a denial by writing to the Assistant Administrator, who must respond in writing within 30 days.

(C) The Regional Administrator and the Assistant Administrator will make their decisions in accordance with the Magnuson-Stevens Act, other applicable laws, and the FEPs.

(D) To minimize conflicts between the Federal and state/territorial/commonwealth management systems, the Council will use the procedures in this paragraph (e)(2)(ii) to respond to state/territorial/commonwealth management actions. The Council's consideration of action would normally begin with a representative of the state, territorial or commonwealth government bringing a potential or actual management conflict or need to the Council's attention.

(3) *Annual report.* By July 31 of each year, a Council-appointed coral reef ecosystem monitoring team will prepare an annual report on coral reef fisheries of the western Pacific region. The report will contain, among other things:

(i) Fishery performance data, summaries of new information and assessments of need for Council action.

(ii) Recommendation for Council action. The Council will evaluate the annual report and advisory body recommendations and may recommend management action by either the state/territorial/commonwealth governments or by Federal regulation.

(iii) If the Council believes that management action should be considered, it will make specific recommendations to the Regional Administrator after considering the views of its advisory bodies.

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§665.19 Vessel monitoring system.

(a) *Applicability.* The holder of any of the following permits is subject to the vessel monitoring system requirements in this part:

(1) Hawaii longline limited access permit issued pursuant to §665.801(b);

(2) American Samoa longline limited entry permit, for vessel size Class C or D, issued pursuant to §665.801(c);

(3) Vessels permitted to fish in Crustacean Permit Area 1 VMS Subarea; or

(4) CNMI commercial bottomfish permit, if the vessel is a medium or large bottomfish vessel, issued pursuant to §665.404(a)(2).

(b) *VMS unit.* Only a VMS unit owned by NMFS and installed by NMFS complies with the requirement of this subpart.

(c) *Notification.* After a permit holder subject to §665.19(a) has been notified by the SAC of a specific date for installation of a VMS unit on the permit holder's vessel, the vessel must carry and operate the VMS unit after the date scheduled for installation.

(d) *Fees and charges.* During the experimental VMS program, the holder of a permit subject to §665.19(a) shall not be assessed any fee or other charges to obtain and use a VMS unit, including the communication charges related directed to requirements under this section. Communication charges related to any additional equipment attached to the VMS unit by the owner or operator shall be the responsibility of the owner or operator and not NMFS.

(e) *Permit holder duties.* The holder of a permit subject to §665.19(a) and master of the vessel must:

(1) Provide opportunity for the SAC to install and make operational a VMS unit after notification.

(2) Carry and continuously operate the VMS unit on board whenever the vessel is at sea.

(3) Not remove, relocate, or make non-operational the VMS unit without prior approval from the SAC.

(f) *Authorization by the SAC.* The SAC has authority over the installation and operation of the VMS unit. The SAC may authorize the connection or order the disconnection of additional equipment, including a computer, to any VMS unit when deemed appropriate by the SAC.

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§665.20 Western Pacific Community Development Program.

(a) *General.* In accordance with the criteria and procedures specified in this section, the Regional Administrator may authorize the direct or incidental harvest of management unit species that would otherwise be prohibited by this part.

(b) *Eligibility.* To be eligible to participate in the western Pacific community development program, a community must meet the following criteria:

(1) Be located in American Samoa, Guam, Hawaii, or the Northern Mariana Islands (collectively, the western Pacific);

(2) Consist of community residents descended from aboriginal people indigenous to the western Pacific who conducted commercial or subsistence fishing using traditional fishing practices in the waters of the western Pacific;

(3) Consist of individuals who reside in their ancestral homeland;

(4) Have knowledge of customary practices relevant to fisheries of the western Pacific;

(5) Have a traditional dependence on fisheries of the western Pacific;

(6) Are currently experiencing economic or other constraints that have prevented full participation in the western Pacific fisheries and, in recent years, have not had harvesting, processing or marketing capability sufficient to support substantial participation in fisheries in the area; and

(7) Develop and submit a community development plan to the Council and the NMFS that meets the requirements in paragraph (c) of this section.

(c) *Community development plan.* An eligible community seeking access to a fishery under the authority of the Council and NMFS must submit to the Council a community development plan that includes, but is not limited to, the following information:

(1) A statement of the purposes and goals of the plan.

(2) A description and justification for the specific fishing activity being proposed, including:

(i) Location of the proposed fishing activity.

(ii) Management unit species to be harvested, and any potential bycatch.

(iii) Gear type(s) to be used.

(iv) Frequency and duration of the proposed fishing activity.

(3) A statement describing the degree of involvement by the indigenous community members, including the name, address, telephone and other contact information of each individual conducting the proposed fishing activity.

(4) A description of how the community and or its members meet each of the eligibility criteria in paragraph (b) of this section.

(5) If a vessel is to be used by the community to conduct fishing activities, for each vessel:

(i) Vessel name and official number (USCG documentation, state, territory, or other registration number).

(ii) Vessel length overall, displacement, and fish holding capacity.

(iii) Any valid federal fishing permit number(s).

(iv) Name, address, and telephone number of the vessel owner(s) and operator(s).

(d) *Council review.* The Council will review each community development plan to ensure that it meets the intent of the Magnuson-Stevens Act and contains all required information. The Council may consider advice of its advisory panels in conducting this review. If the Council finds the community development plan is complete, it will transmit the plan to the Regional Administrator for review.

(e) *Agency review and approval.* (1) Upon receipt of a community development plan from the Council, the Regional Administrator will review the plan for consistency with paragraphs (b), (c), and (d) of this section, and other applicable laws. The Regional Administrator may request from the applicant additional information necessary to make the determinations pursuant to this section and other applicable laws before proceeding with the review pursuant to paragraph (e)(2) of this section.

(2) If the Regional Administrator determines that a plan contains the required information and is consistent with paragraphs (b), (c), and (d) of this section, and other applicable laws, NMFS will publish a notice in the FEDERAL REGISTER to solicit public comment on the proposed plan and any associated environmental review documents. The notice will include the following:

(i) A description of the fishing activity to be conducted.

(ii) The current utilization of domestic annual harvesting and processing capacity (including existing experimental harvesting, if any) of the target, incidental, and bycatch species.

(iii) A summary of any regulations that would otherwise prohibit the proposed fishing activity.

(iv) Biological and environmental information relevant to the plan, including appropriate statements of environmental impacts on target and non-target stocks, marine mammals, and threatened or endangered species.

(3) Within 90 days from the end of the comment period on the plan, the Regional Administrator will notify the applicant in writing of the decision to approve or disapprove the plan.

(4) If disapproved, the Regional Administrator will provide the reasons for the plan's disapproval and provide the community with the opportunity to modify the plan and resubmit it for review. Reasons for disapproval may include, but are not limited to, the following:

(i) The applicant failed to disclose material information or made false statements related to the plan.

(ii) The harvest would contribute to overfishing or would hinder the recovery of an overfished stock, according to the best scientific information available.

(iii) The activity would be inconsistent with an applicable law.

(iv) The activity would create a significant enforcement, monitoring, or administrative problem, as determined by the Regional Administrator.

(5) If approved, the Regional Administrator will publish a notice of the authorization in the FEDERAL REGISTER, and may attach limiting terms and conditions to the authorization including, but not limited to, the following:

(i) The maximum amount of each management unit species and potential bycatch species that may be harvested and landed during the term of the authorization.

(ii) The number, sizes, names, identification numbers, and federal permit numbers of the vessels authorized to conduct fishing activities.

(iii) Type, size, and amount of gear used by each vessel, including trip limits.

(iv) The times and places where fishing may or may not be conducted.

(v) Notification, observer, vessel monitoring, and reporting requirements.

(f) *Duration.* Unless otherwise specified, and unless revoked, suspended, or modified, a plan may be effective for no longer than five years.

(g) *Transfer.* Plans authorized under this section are not transferable or assignable.

(h) *Sanctions.* The Regional Administrator may revoke, suspend or modify a community development plan in the case of failure to comply with the terms and conditions of the plan, any other applicable provision of this part, the Magnuson-Stevens Act, or other applicable laws.

(i) *Program review.* NMFS and the Council will periodically review and assess each plan. If fishery, environmental, or other conditions have changed such that the plan's goals or requirements are not being met, or the fishery has become in an overfished state or overfishing is occurring, the Regional Administrator may revoke, suspend, or modify the plan.

[75 FR 54046, Sept. 3, 2010]

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Subpart C—Hawaii Fisheries

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§665.198 Management area.

The Hawaii fishery management area is the EEZ seaward of the State of Hawaii, including the Main Hawaiian Islands (MHI) and Northwestern Hawaiian Islands (NWHI), with the inner boundary a line coterminous with the seaward boundaries of the State of Hawaii and the outer boundary a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured.

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§665.199 Area restrictions [Reserved]

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§665.200 Hawaii bottomfish and seamount groundfish fisheries. [Reserved]

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§665.201 Definitions.

As used in §§665.200 through 665.219:

Hawaii bottomfish management unit species (Hawaii bottomfish MUS) means the following species:

Local name	English common name	Scientific name
Lehi	silver jaw jobfish	*Aphareus rutilans.*
Uku white papio, ulua au	gray jobfish	*Aprion virescens.*
kea	giant trevally	*Caranx ignobilis.*
ulua la`uli	black jack	*Caranx lugubris.*
hpu`upu`u	sea bass	*Epinephalus quernus.*
Ehuonaga, `ula`ula	red snapper	*Etelis carbunculus.*
koa`e	longtail snapper	*Etelis coruscans.*
ta`ape	blue stripe snapper	*Lutjanus kasmira.*
kalekale	yellowtail snapper	*Pristipomoides auricilla.*
`pakapaka	pink snapper	*Pristipomoides filamentosus.*
kalekale	pink snapper	*Pristipomoides seiboldii.*
gindai	snapper	*Pristipomoides zonatus.*
pig ulua, butaguchi	thicklip trevally	*Pseudocaranx dentex.*
kahala	amberjack	*Seriola dumerili.*

Hawaii restricted bottomfish species fishing year means the year beginning at 0001 HST on September 1 and ending at 2400 HST on August 31 of the next calendar year.

Main Hawaiian Islands non-commercial bottomfish permit means the permit required by §665.203(a)(2) to own or fish from a vessel that is used in any non-commercial vessel-based fishing, landing, or transshipment of any Hawaii bottomfish MUS in the MHI Management Subarea.

Protected species study zone means the waters within 50 nm, as designated by the Regional Administrator pursuant to §665.208, around the following islands of the NWHI and as measured from the following coordinates:

Name	N. lat.	W. long.
Nihoa Island	23°05′	161°55′
Necker Island	23°35′	164°40′
French Frigate Shoals	23°45′	166°15′
Gardner Pinnacles	25°00′	168°00′
Maro Reef	25°25′	170°35′
Laysan Island	25°45′	171°45′
Lisianski Island	26°00′	173°55′
Pearl and Hermes Reef	27°50′	175°50′
Midway Island	28°14′	177°22′
Kure Island	28°25′	178°20′

Seamount Groundfish means the following species:

Common name	Scientific name
Armorhead	*Pseudopentaceros wheeleri.*
Alfonsin	*Beryx splendens.*
Raftfish	*Hyperoglyphe japonica.*

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§665.202 Management subareas.

(a) The Hawaii fishery management area is divided into subareas with the following designations and boundaries:

(1) Main Hawaiian Islands means the U.S. EEZ around the Hawaiian Archipelago lying to the east of 161°20′ W. long.

(2) Northwestern Hawaiian Islands means the EEZ around the Hawaiian Archipelago lying to the west of 161°20′ W. long. For the purposes of regulations issued under this subpart, Midway Island is treated as part of the NWHI Subarea.

(i) Ho'omalu Zone means that portion of the EEZ around the NWHI west of 165° W. long.

(ii) Mau Zone means that portion of the EEZ around the NWHI between 161°20′ W. long. and 165° W. long.

(3) Hancock Seamounts Ecosystem Management Area means that portion of the EEZ in the Northwestern Hawaiian Islands west of 180° W. long. and north of 28° N. lat.

(b) The inner boundary of each management subarea is a line coterminous with the seaward boundaries of the State of Hawaii.

(c) The outer boundary of each management subarea is a line drawn in such a manner that each point on it is 200 nautical miles from the baseline from which the territorial sea is measured.

[75 FR 2205, Jan. 14, 2010, as amended at 75 FR 69015, Nov. 10, 2010]

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§665.203 Permits.

(a) *Applicability*—(1) *Northwestern Hawaiian Islands.* The owner of any vessel used to fish for, land, or transship Hawaii bottomfish MUS shoreward of the outer boundary of the NWHI subarea must have a permit issued under this section, and the permit must be registered for use with that vessel. PIRO will not register a single vessel for use with a Ho'omalu Zone permit and a Mau Zone permit at the same time. Mau Zone permits issued before June 14, 1999, became invalid June 14, 1999, except that a permit issued to a person who submitted a timely application under paragraph (b)(3) of this section is valid until the permit holder either receives a Mau Zone limited entry permit or until final agency action is taken on the permit holder's application. The Ho'omalu Zone and the Mau Zone limited entry systems described in this section are subject to abolition, modification, or additional effort limitation programs.

(2) *MHI non-commercial.* The owner of a vessel that is used for and any person who participates in non-commercial, vessel-based fishing, landing, or transshipment of Hawaii bottomfish MUS in the MHI management subarea is required to obtain an MHI non-commercial bottomfish permit or a State of Hawaii Commercial Marine License. If one or more persons on a vessel-based bottomfish fishing trip holds an MHI non-commercial permit, then the entire trip is considered non-commercial, and not commercial. However, if any commercial fishing occurs during or as a result of a vessel-based fishing trip, then the fishing trip is considered commercial, and not non-commercial. Charter boat customers are not subject to the requirements of the section.

(b) *Submission.* (1) An application for a permit required under this section must be submitted to PIRO as described in §665.13.

(2) Ho'omalu Zone limited access permit. In addition to an application under §665.13(c), each applicant for a Ho'omalu Zone permit must also submit a supplementary information sheet provided by PIRO, which must be signed by the vessel owner or a designee and include the following information:

(i) The qualification criterion that the applicant believes he or she meets for issuance of a limited access permit;

(ii) A copy of landings receipts or other documentation, with a certification from a state or Federal agency that this information is accurate, to demonstrate participation in the NWHI bottomfish fishery; and

(iii) If the application is filed by a partnership or corporation, the names of each of the individual partners or shareholders and their respective percentages of ownership of the partnership or corporation.

(3) Mau Zone limited access permit. PIRO will not accept applications for a new Mau Zone permit after June 14, 1999. In addition to an application under §665.13(c), each applicant for a Mau Zone permit must also submit a supplementary information sheet provided by PIRO, which must be signed by the vessel owner or a designee and include the following information:

(i) The qualification criterion that the applicant believes he or she meets for issuance of a limited access permit;

(ii) Copy of State of Hawaii catch report(s) to demonstrate that the permitted vessel had made qualifying landings of bottomfish from the Mau Zone; and

(iii) If the application is filed by a partnership or corporation, the names of each of the individual partners or shareholders and their respective percentage of ownership of the partnership or corporation.

(c) Sale or transfer of Ho'omalu limited access permits to new vessel owners.

(1) A Ho'omalu zone permit may not be sold or otherwise transferred to a new owner.

(2) A Ho'omalu zone permit or permits may be held by a partnership or corporation. If 50 percent or more of the ownership of the vessel passes to persons other than those listed in the original application, the permit will lapse and must be surrendered to the Regional Administrator.

(d) Transfer of Ho'omalu Zone limited access permits to replacement vessels.

(1) Upon application by the owner of a permitted vessel, the Regional Administrator will transfer that owner's permit to a replacement vessel owned by that owner, provided that the replacement vessel does not exceed 60 ft (18.3 m) LOA. The replacement vessel must be put into service no later than 12 months after the owner applies for the transfer, or the transfer shall be void.

(2) An owner of a permitted vessel may apply to the Regional Administrator for transfer of that owner's permit to a replacement vessel greater than 60 ft (18.3 m) LOA. The Regional Administrator may transfer the permit upon determining, after consultation with the Council and considering the objectives of the limited access program, that the replacement vessel has catching power that is comparable to the rest of the vessels holding permits for the fishery, or has catching power that does not exceed that of the original vessel, and that the transfer is not inconsistent with the objectives of the program. The Regional Administrator shall consider vessel length, range, hold capacity, gear limitations, and other appropriate factors in making determinations of catching power equivalency and comparability of the catching power of vessels in the fishery.

(e) Ho'omalu Zone limited access permit renewal.

(1) A qualifying landing for Ho'omalu Zone permit renewal is a landing of at least 2,500 lb (1,134 kg) of Hawaii bottomfish MUS from the Ho'omalu Zone or a landing of at least 2,500 lb (1,134 kg) of fish from the Ho'omalu Zone, of which at least 50 percent by weight was Hawaii bottomfish MUS. A permit is eligible for renewal for the next calendar year if the vessel covered by the permit made three or more qualifying landings during the current calendar year.

(2) The owner of a permitted vessel that did not make three or more qualifying landings of bottomfish in a year may apply to the Regional Administrator for a waiver of the landing requirement. If the Regional Administrator finds that failure to make three landings was due to circumstances beyond the owner's control, the Regional Administrator may renew the permit. A waiver may not be granted if the failure to make three landings was due to general economic conditions or market conditions, such that the vessel operations would not be profitable.

(f) Issuance of new Ho'omalu Zone limited access permits. The Regional Administrator may issue new Ho'omalu Zone limited access permits under §665.13 if the Regional Administrator determines, in consultation with the Council, that bottomfish stocks in the Ho'omalu Zone are able to support additional fishing effort.

(g) Eligibility for new Ho'omalu Zone limited access permits. When the Regional Administrator has determined that new permits may be issued, they shall be issued to applicants based upon eligibility, determined as follows:

(1) *Point system.* (i) Two points will be assigned for each year in which the applicant was owner or captain of a vessel that made three or more of any of the following types of landings in the NWHI:

(A) Any amount of Hawaii bottomfish MUS, regardless of weight, if made on or before August 7, 1985;

(B) At least 2,500 lb (1,134 kg) of Hawaii bottomfish MUS, if made after August 7, 1985; or

(C) At least 2,500 lb (1,134 kg) of any fish lawfully harvested from the NWHI, of which at least 50 percent by weight was bottomfish, if made after August 7, 1985.

(ii) One point will be assigned for each year in which the applicant was owner or captain of a vessel that landed at least 6,000 lb (2,722 kg) of bottomfish from the MHI.

(iii) For any one year, points will be assigned under either paragraph (g)(1)(i) or (g)(1)(ii) of this section, but not under both paragraphs.

(iv) Before the Regional Administrator issues a Ho'omalu zone permit to fish for bottomfish under this section, the primary operator and relief operator named on the application form must have completed a protected species workshop conducted by NMFS.

(2) *Restrictions.* An applicant must own at least a 25 percent share in the vessel that the permit would cover, and only one permit will be assigned to any vessel.

(3) *Order of issuance.* New permits shall be awarded to applicants in descending order, starting with the applicant with the largest number of points. If two or more persons have an equal number of points, and there are insufficient new permits for all such applicants, the new permits shall be awarded by the Regional Administrator through a lottery.

(4) *Notification.* The Regional Administrator shall place a notice in the FEDERAL REGISTER and shall use other means to notify prospective applicants of the opportunity to file applications for new permits under this program.

(h) Eligibility for new Mau Zone limited access permits.

(1) PIRO will issue an initial Mau Zone permit to a vessel owner who qualifies for at least three points under the following point system:

(i) An owner who held a Mau Zone permit on or before December 17, 1991, and whose permitted vessel made at least one qualifying landing of Hawaii bottomfish MUS on or before December 17, 1991, shall be assigned 1.5 points.

(ii) An owner whose permitted vessel made at least one qualifying landing of Hawaii bottomfish MUS during 1991 shall be assigned 0.5 point.

(iii) An owner whose permitted vessel made at least one qualifying landing of Hawaii bottomfish MUS during 1992 shall be assigned 1.0 point.

(iv) An owner whose permitted vessel made at least one qualifying landing of Hawaii bottomfish MUS during 1993 shall be assigned 1.5 points.

(v) An owner whose permitted vessel made at least one qualifying landing of Hawaii bottomfish MUS during 1994 shall be assigned 2.0 points.

(vi) An owner whose permitted vessel made at least one qualifying landing of Hawaii bottomfish MUS during 1995 shall be assigned 2.5 points.

(vii) An owner whose permitted vessel made at least one qualifying landing of Hawaii bottomfish MUS during 1996 shall be assigned 3.0 points.

(viii) Before PIRO issues a Mau Zone permit to fish for bottomfish under this section, the primary operator and relief operator named on the application form must have completed a protected species workshop conducted by NMFS.

(2) For purposes of this paragraph (h), a “qualifying landing” means any amount of Hawaii bottomfish MUS lawfully harvested from the Mau Zone and offloaded for sale. No points shall be assigned to an owner for any qualifying landings reported to the State of Hawaii more than 1 year after the landing.

(3) More than one Mau Zone permit may be issued to an owner of two or more vessels, provided each of the owner's vessels for which a permit will be registered for use has made the required qualifying landings for the owner to be assigned at least three eligibility points.

(4) A Mau Zone permit holder who does not own a vessel at the time initial permits are issued must register the permit for use with a vessel owned by the permit holder within 12 months from the date the permit was issued. In the interim, the permit holder may register the permit for use with a leased or chartered vessel. If within 12 months of initial permit issuance, the permit holder fails to apply to PIRO to register the permit for use with a vessel owned by the permit holder, then the permit shall expire.

(5) For each of paragraphs (h)(1)(i) through (h)(1)(viii) of this section, PIRO shall assign points based on the landings of one permitted vessel to only one owner if the vessel did not have multiple owners during the time frame covered by the subordinate paragraphs. If a vessel had multiple owners during a time frame covered by any of paragraphs (h)(1)(i) through (h)(1)(viii) of this section (including joint owners, partners, or shareholders of a corporate owner), PIRO will assign the points for that subordinate paragraph to a single owner if only one owner submits an application with respect to the landings of that vessel during that time frame. If multiple owners submit separate applications with respect to the same landings of the same vessel during the same time frame, then PIRO shall:

(i) Adhere to any written agreement between the applicants with respect to who among them shall be assigned the aggregate point(s) generated by landings during such time frame(s), or

(ii) If there is no agreement:

(A) Shall issue the applicants a joint permit provided the vessel's landings during such time frames generated at least three points, or

(B) In the event the vessel's landings during such time frame(s) generated less than three points, shall not assign any points generated by the vessel's landings during such time frame(s).

(i) Ownership requirements and registration of Mau Zone limited access permits for use with other vessels.

(1) A Mau Zone permit may be held by an individual, partnership, or corporation. No more than 49 percent of the underlying ownership interest in a Mau Zone permit may be sold, leased, chartered, or otherwise transferred to another person or entity. If more than 49 percent of the underlying ownership of the permit passes to persons or entities other than those listed in the original permit application supplemental information sheet, then the permit expires and must be surrendered to PIRO.

(2) A Mau Zone permit holder may apply under §665.13 to PIRO to register the permit for use with another vessel if that vessel is owned by the permit holder, and is no longer than 60 ft (18.3 m) LOA.

(3) If a Mau Zone permit holder sells the vessel for which the permit is registered for use, the permit holder must, within 12 months of the date of sale, apply to PIRO to register the permit for use with a vessel owned by the permit holder. If the permit holder has not applied to register a replacement vessel within 12 months, then the permit expires.

(4) If a permitted vessel owned by the permit holder is sold or becomes unseaworthy, the Mau Zone permit with which the vessel was registered may be registered for use with a leased or chartered vessel for a period not to exceed 12 months from the date of registration of the leased or chartered vessel. If by the end of that 12-month period the permit holder fails to apply to PIRO to register the permit for use with a vessel owned by the permit holder, then the permit expires.

(j) Mau Zone limited access permit renewal.

(1) A Mau Zone permit will be eligible for renewal if the vessel for which the permit is registered for use made at least five separate fishing trips with landings of at least 500 lb (227 kg) of Hawaii bottomfish MUS per trip during the calendar year. Only one landing of bottomfish MUS per fishing trip to the Mau Zone will be counted toward the landing requirement.

(2) If the vessel for which the permit is registered for use fails to meet the landing requirement of paragraph (j)(1) of this section, the owner may apply to the Regional Administrator for a waiver of the landing requirement. Grounds for a waiver are limited to captain incapacitation, vessel breakdowns, and the loss of the vessel at sea if the event prevented the vessel from meeting the landing requirement. Unprofitability is not sufficient for waiver of the landing requirement.

(3) Failure of the permit holder to register a vessel for use under the permit does not exempt a permit holder from the requirements specified in this paragraph.

(k) Appeals of permit actions.

(1) Except as provided in subpart A of 15 CFR part 904, any applicant for a permit or a permit holder may appeal the granting, denial, or revocation of his or her permit to the Regional Administrator.

(2) In order to be considered by the Regional Administrator, such appeal must be in writing, must state the action appealed, and the reasons therefore, and must be submitted within 30 days of the appealed action. The appellant may request an informal hearing on the appeal.

(3) The Regional Administrator, in consultation with the Council, will decide the appeal in accordance with the FEP and implementing regulations and based upon information relative to the application on file at NMFS and the Council, the summary record kept of any hearing, the hearing officer's recommended decision, if any, and any other relevant information.

(4) If a hearing is requested, or if the Regional Administrator determines that one is appropriate, the Regional Administrator may grant an informal hearing before a hearing officer designated for that purpose. The applicant or permit holder may appear personally and/or be represented by counsel at the hearing and submit information and present arguments as determined appropriate by the hearing officer. Within 30 days of the last day of the hearing, the hearing officer shall recommend in writing a decision to the Regional Administrator.

(5) The Regional Administrator may adopt the hearing officer's recommended decision, in whole or in part, or may reject or modify it. The Regional Administrator's decision on the application is the final administrative decision of the Department of Commerce, and is effective on the date the Administrator signs the decision.

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§665.204 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and §665.15, it is unlawful for any person to do any of the following:

(a) Fish for Hawaii bottomfish or seamount groundfish MUS using gear prohibited under §665.206.

(b) Fish for, or retain on board a vessel, Hawaii bottomfish MUS in the Ho'omalu Zone or the Mau Zone without the appropriate permit registered for use with that vessel issued under §665.13.

(c) Serve as primary operator or relief operator on a vessel with a Mau or Ho'omalu Zone permit without completing a protected species workshop conducted by NMFS, as required by §665.203.

(d) Fail to notify the USCG at least 24 hours prior to making any landing of bottomfish taken in the Ho'omalu Zone, as required by §665.205.

(e) Fish within any protected species study zone in the NWHI without notifying the Regional Administrator of the intent to fish in these zones, as required under §664.205.

(f) Falsify or fail to make or file reports of all fishing activities shoreward of the outer boundary of the MHI management subarea, in violation of §665.14(a) or (b).

(g) Own a vessel or fish from a vessel that is used to fish non-commercially for any Hawaii bottomfish MUS in the MHI management subarea without either a MHI non-commercial bottomfish permit or a State of Hawaii Commercial Marine License, in violation of §§665.2 or 665.203(a)(2).

(h) Fish for or possess any Hawaii Restricted Bottomfish Species as specified in §665.210, in the MHI management subarea after a closure of the fishery, in violation of §665.211.

(i) Sell or offer for sale any Hawaii Restricted Bottomfish Species, as specified in §665.210, after a closure of the fishery, in violation of §665.211.

(j) Harvest, possess, or land more than a total of five fish (all species combined) identified as Hawaii Restricted Bottomfish Species in §665.210 from a vessel in the MHI management subarea, while holding a MHI non-commercial bottomfish permit, or while participating as a charter boat customer, in violation of §665.212.

(k) Fish for or possess any Hawaii bottomfish or seamount groundfish MUS in the Hancock Seamounts Ecosystem Management Area, in violation of §665.209.

[75 FR 2205, Jan. 14, 2010, as amended at 75 FR 69015, Nov. 10, 2010]

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§665.205 Notification.

(a) The owner or operator of a fishing vessel subject to §665.203(a)(1) must inform PIRO at least 72 hours (not including weekends and holidays) before leaving port, of his or her intent to fish within the protected species study zones defined in §665.201. The notice must include the name of the vessel, name of the operator, intended departure and return date, and a telephone number at which the owner or operator may be contacted during the business day (8 a.m. to 5 p.m.) to indicate whether an observer will be required on the subject fishing trip.

(b) The operator of a fishing vessel that has taken Hawaii bottomfish MUS in the Ho'omalu Zone must contact the USCG, by radio or otherwise, at the 14th District, Honolulu, HI; Pacific Area, San Francisco, CA; or 17th District, Juneau, AK, at least 24 hours before landing, and report the port and the approximate date and time at which the bottomfish will be landed.

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§665.206 Gear restrictions.

(a) *Bottom trawls and bottom set gillnets.* Fishing for Hawaii bottomfish and seamount groundfish MUS with bottom trawls and bottom set gillnets is prohibited.

(b) *Possession of gear.* Possession of a bottom trawl and bottom set gillnet by any vessel having a permit under §665.203 or otherwise established to be fishing for Hawaii bottomfish or seamount groundfish MUS in the management subareas is prohibited.

(c) *Poisons and explosives.* The possession or use of any poisons, explosives, or intoxicating substances for the purpose of harvesting Hawaii bottomfish and seamount groundfish MUS is prohibited.

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§665.207 At-sea observer coverage.

(a) All fishing vessels subject to §§665.200 though 665.212 must carry an observer when directed to do so by the Regional Administrator.

(b) PIRO will advise the vessel owner or operator of any observer requirement within 72 hours (not including weekends or holidays) of receipt of the notice provided pursuant to §665.205(a). If an observer is required, the owner or operator will be informed of the terms and conditions of observer coverage, and the time and place of embarkation of the observer.

(c) All observers must be provided with sleeping, toilet, and eating accommodations at least equal to that provided to a full crew member. A mattress or futon on the floor, or a cot, is not acceptable in place of a regular bunk. Meal and other galley privileges must be the same for the observer as for other crew members.

(d) Female observers on a vessel with an all-male crew must be accommodated either in a single-person cabin or, if reasonable privacy can be ensured by installing a curtain or other temporary divider, in a two-person cabin shared with a licensed officer of the vessel. If the cabin assigned to a female observer does not have its own toilet and shower facilities that can be provided for the exclusive use of the observer, then a schedule for time-sharing of common facilities must be established and approved by the Regional Administrator prior to the vessel's departure from port.

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§665.208 Protected species conservation.

The Regional Administrator may change the size of the protected species study zones defined in §665.201 of this subpart:

(a) If the Regional Administrator determines that a change in the size of the study zones would not result in fishing for bottomfish in the NWHI that would adversely affect any species listed as threatened or endangered under the ESA.

(b) After consulting with the Council.

(c) Through notification in the FEDERAL REGISTER published at least 30 days prior to the effective date or through actual notice to the permit holders.

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§665.209 Fishing moratorium at Hancock Seamounts.

Fishing for, and possession of, Hawaii bottomfish and seamount groundfish MUS in the Hancock Seamounts Ecosystem Management Area is prohibited until the Regional Administrator determines that the armorhead stock is rebuilt.

[75 FR 69016, Nov. 10, 2010]

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§665.210 Hawaii restricted bottomfish species.

Hawaii restricted bottomfish species means the following species:

Local name	English common name	Scientific name
lehi	silver jaw jobfish	*Aphareus rutilans.*
ehu	squirrelfish snapper	*Etelis carbunculus.*
onaga	longtail snapper	*Etelis coruscans.*
opakapaka	Pink snapper	*Pristipomoides filamentosus.*
kalekale	snapper	*Pristipomoides sieboldii.*

gindai	snapper	*Pristipomoides zonatus.*
hapu`upu`u	sea bass	*Epinephelus quernus.*

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§665.211 Total Allowable Catch (TAC) limit.

(a) TAC limits will be set annually for the fishing year by NMFS, as recommended by the Council, based on the best available scientific, commercial, and other information, and taking into account the associated risk of overfishing.

(b) The Regional Administrator shall publish a notice indicating the annual TAC limit in the FEDERAL REGISTER by August 31 of each year, and shall use other means to notify permit holders of the TAC limit for the year.

(c) When the TAC limit specified in this section is projected to be reached based on analyses of available information, the Regional Administrator shall publish a notice to that effect in the FEDERAL REGISTER and shall use other means to notify permit holders. The notice will include an advisement that the fishery will be closed beginning at a specified date, which is not earlier than 7 days after the date of filing the closure notice for public inspection at the Office of the Federal Register, until the end of the fishing year in which the TAC is reached.

(d) On and after the date specified in §665.211(c), no person may fish for or possess any Hawaii Restricted Bottomfish Species as specified in §665.210 in the MHI management subarea, except as otherwise allowed in this section.

(e) On and after the date specified in §665.211(c), no person may sell or offer for sale Hawaii Restricted Bottomfish Species as specified in §665.210, except as otherwise authorized by law.

(f) Fishing for, and the resultant possession or sale of, Hawaii Restricted Bottomfish Species by vessels legally registered to Mau Zone, Ho`omalu Zone, or PRIA bottomfish fishing permits and conducted in compliance with all other laws and regulations, is exempted from this section.

[75 FR 2205, Jan. 14, 2010, as amended at 76 FR 15222, Mar. 21, 2011]

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§665.212 Non-commercial bag limits.

No more than a total of five fish (all species combined) identified as Hawaii Restricted Bottomfish Species as specified in §665.210, may be harvested, possessed, or landed by any individual participating in a non-commercial vessel-based fishing trip in the MHI management subarea. Charter boat customers are also subject to the bag limit.

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§§665.213-665.219 [Reserved]

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§665.220 Hawaii coral reef ecosystem fisheries. [Reserved]

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§665.221 Definitions.

As used in §§665.220 through 665.239:

Hawaii coral reef ecosystem management unit species (Hawaii coral reef ecosystem MUS) means all of the Currently Harvested Coral Reef Taxa and Potentially Harvested Coral Reef Taxa listed in this section and which spend the majority of their non-pelagic (post-settlement) life stages within waters less than or equal to 50 fathoms in total depth.

Hawaii Currently Harvested Coral Reef Taxa:

Family name	Local name	English common name	Scientific name
Acanthuridae (Surgeonfishes)	na`ena`e	orange-spot surgeonfish	*Acanthurus olivaceus.*
	Pualu	yellowfin surgeonfish	*Acanthurus xanthopterus.*
	Manini	convict tang	*Acanthurus triostegus.*
	Palani	eye-striped surgeonfish	*Acanthurus dussumieri.*
	Maiko	blue-lined surgeon	*Acanthurus nigroris.*
	maiko, maikoiko	whitebar surgeonfish	*Acanthurus leucopareius.*
		whitecheek surgeonfish	*Acanthurus nigricans.*
	`api	white-spotted surgeonfish	*Acanthurus guttatus.*
	Pualu	ringtail surgeonfish	*Acanthurus blochii.*
	mai`i`i	brown surgeonfish	*Acanthurus nigrofuscus.*
	Kole	yellow-eyed surgeonfish	*Ctenochaetus strigosus.*
	NA	striped bristletooth	*Ctenochaetus striatus.*
	Kala	bluespine unicornfish	*Naso unicornus.*
	kalalei, umaumalei	orangespine unicornfish	*Naso lituratus.*
Acanthuridae (Surgeonfishes)	kala holo	black tongue	*Naso hexacanthus.*

		unicornfish	
	Kala	whitemargin unicornfish	*Naso annulatus.*
	kala lolo	spotted unicornfish	*Naso brevirostris.*
		gray unicornfish	*Naso caesius.*
	lau`ipala	yellow tang	*Zebrasoma flavescens.*
Balistidae (Triggerfish)	humuhumu hi`ukole	pinktail triggerfish	*Melichthys vidua.*
	humuhumu `ele`ele	black triggerfish	*Melichthys niger.*
	humuhumu nukunuku apua`a	picassofish	*Rhinecanthus aculeatus.*
		bridled triggerfish	*Sufflamen fraenatum.*
Carangidae (Jacks)	akule, hahalu	bigeye scad	*Selar crumenophthalmus.*
	`opelu, `opelu mama	mackerel scad	*Decapterus macarellus.*
Carcharhinidae (Sharks)	Man	grey reef shark	*Carcharhinus amblyrhynchos.*
	Man	galapagos shark	*Carcharhinus galapagensis.*
	Man	blacktip reef shark	*Carcharhinus melanopterus.*
	man lalakea	whitetip reef shark	*Triaenodon obesus.*
Holocentridae (Soldierfish/Squirrel- fish)	menpachi, `u`u menpachi, `u`u	bigscale soldierfish brick soldierfish	*Myripristis berndti. Myripristis amaena.*
	menpachi, `u`u	yellowfin soldierfish	*Myripristis chryseres.*
	menpachi, `u`u	pearly soldierfish	*Myripristis kuntee.*
	`ala`ihi	file-lined squirrelfish	*Sargocentron microstoma.*
	`ala`ihi	crown squirrelfish	*Sargocentron diadema.*
	`ala`ihi	peppered squirrelfish	*Sargocentron punctatissimum.*
	`ala`ihi	blue-lined squirrelfish	*Sargocentron tiere.*

	`ala`ihi	Hawaiian squirrelfish	*Sargocentron xantherythrum.*
	`ala`ihi	saber or long jaw squirrelfish	*Sargocentron spiniferum.*
	`ala`ihi	spotfin squirrelfish	*Neoniphon* spp.
Kuhliidae (Flagtails)	`aholehole	Hawaiian flag-tail	*Kuhlia sandvicensis.*
Kyphosidae (Rudderfish)	Nenue	rudderfish	*Kyphosus biggibus.*
	Nenue	rudderfish	*Kyphosus cinerascens.*
	Nenue	rudderfish	*Kyphosus vaigiensis.*
Labridae (Wrasses)	`a`awa	saddleback hogfish	*Bodianus bilunulatus.*
	po`ou	ring-tailed wrasse	*Oxycheilinus unifasciatus.*
	laenihi, nabeta	razor wrasse	*Xyrichtys pavo.*
	kupoupou ho`u	cigar wrasse	*Cheilio inermis.*
		surge wrasse	*Thalassoma purpureum.*
		red ribbon wrasse	*Thalassoma quinquevittatum.*
		sunset wrasse	*Thalassoma lutescens.*
		rockmover wrasse	*Novaculichthys taeniourus.*
Mullidae (Goatfishes)	Weke	yellow goatfish	*Mulloidichthys* spp.
	weke nono	orange goatfish	*Mulloidichthys pfleugeri.*
	weke`ula	yellowfin goatfish	*Mulloidichthys vanicolensis.*
	weke`a or weke a`a	yellowstripe goatfish	*Mulloidichthys flavolineatus.*
	kumu, moano	banded goatfish	*Parupeneus* spp.
	Munu	doublebar goatfish	*Parupeneus bifasciatus.*
	moano kea, moano kale	yellowsaddle goatfish	*Parupeneus cyclostomas.*
	Malu	side-spot goatfish	*Parupeneus pleurostigma.*
	Moano	multi-barred	*Parupeneus*

		goatfish	*multifaciatus.*
	weke pueo	bandtail goatfish	*Upeneus arge.*
Mugilidae (Mullets)	`ama`ama	stripped mullet	*Mugil cephalus.*
	Uouoa	false mullet	*Neomyxus leuciscus.*
Muraenidae (Moray eels)	puhi paka	yellowmargin moray eel	*Gymnothorax flavimarginatus.*
	Puhi	giant moray eel	*Gymnothorax javanicus.*
	puhi laumilo	undulated moray eel	*Gymnothorax undulatus.*
	Puhi	dragon eel	*Enchelycore pardalis.*
Octopodidae (Octopus)	he`e mauli, tako	octopus	*Octopus cyanea.*
	he`e, tako	octopus	*Octopus ornatus.*
Polynemidae	Moi	threadfin	*Polydactylus sexfilis.*
Priacanthidae (Big-eyes)	`aweoweo	glasseye	*Heteropriacanthus cruentatus.*
	`aweoweo	bigeye	*Priacanthus hamrur.*
Scaridae (Parrotfish)	uhu, palukaluka	parrotfish	*Scarus* spp.
	panuhunuhu	stareye parrotfish	*Calotomus carolinus.*
Sphyraenidae (Barracuda)	kawele`a, kaku	Heller's barracuda	*Sphyraena helleri.*
	Kaku	great barracuda	*Sphyraena barracuda.*
Turbinidae		green snails turban shells	*Turbo* spp.
Zanclidae	kihikihi	moorish idol	*Zanclus cornutus.*
Chaetodontidae	kikakapu	butterflyfish	*Chaetodon auriga.*
	kikakapu	raccoon butterflyfish	*Chaetodon lunula.*
	kikakapu	saddleback butterflyfish	*Chaetodon ephippium.*
Sabellidae		featherduster worm.	

Hawaii Potentially Harvested Coral Reef Taxa:

Local name	English common name	Scientific name
Hinalea	wrasses (Those species not listed as CHCRT)	Labridae.
Man	sharks (Those species not listed as CHCRT)	Carcharhinidae,

		Sphyrnidae.
Hihimanu	rays and skates	Dasyatididae, Myliobatidae.
roi, hapu`upu `u	groupers, seabass (Those species not listed as CHCRT or in BMUS)	Serrandiae.
	tilefishes	Malacanthidae.
dobe, kagami, pa`opa`o, papa, omaka, ulua	jacks and scads (Those species not listed as CHCRT or in BMUS)	Carangidae.
`u`u	solderfishes and squirrelfishes (Those species not listed as CHCRT)	Holocentridae.
weke, moano, kumu	goatfishes (Those species not listed as CHCRT)	Mullidae.
na`ena `e, maikoiko	surgeonfishes (Those species not listed as CHCRT)	Acanthuridae.
	remoras	Echeneidae.
Puhi	eels (Those species not listed as CHCRT)	Muraenidae, Congridae, Ophichthidae.
`upapalu	cardinalfishes	Apogonidae.
	herrings	Clupeidae.
Nehu	anchovies	Engraulidae.
	coral crouchers	Caracanthidae.
`o`opu	gobies	Gobiidae.
to`au	snappers (Those species not listed as CHCRT or in BMUS)	Lutjanidae.
Nunu	trumpetfish	*Aulostomus chinensis.*
nunu peke	cornetfish	*Fistularia commersoni.*
Kihikihi	moorish Idols	Zanclidae.
Kikakapu	butterflyfishes	Chaetodontidae.
	angelfishes	Pomacanthidae.
Mamo	damselfishes	Pomacentridae.
nohu, okoze	scorpionfishes, lionfishes	Scorpaenidae.
pa o'o	blennies	Blenniidae.

Kaku	barracudas (Those species not listed as CHCRT)	Sphyraenidae.
	sandperches	Pinguipedidae.
paki`i	flounders and soles	Bothidae, Soleidae, Pleurnectidae.
Makukana	trunkfishes	Ostraciidae.
humu humu	trigger fishes (Those species not listed as CHCRT)	Balistidae.
Nenue	rudderfishes (Those species not listed as CHCRT)	Kyphosidae.
po`opa`a	hawkfishes (Those species not listed as CHCRT)	Cirrhitidae.
`o`opu hue, fugu	puffer fishes and porcupine fishes	Tetradontidae.
	frogfishes	Antennariidae.
	pipefishes and seahorses	Syngnathidae.
namako, lole, wana	sea cucumbers and sea urchins (Those species not listed as CHCRT)	Echinoderms. Mollusca.
ko`a	ahermatypic corals	Azooxanthellates.
ko`a	mushroom corals	Fungiidae.
ko`a	small and large coral polyps	
	soft corals and gorgonians	
	anemones	Actinaria.
	soft zoanthid corals	Zoanthinaria.
	hydroid corals	Solanderidae.
ko`a	lace corals	Stylasteridae.
ula, a`ama, mo`ala, `alakuma	lobsters, shrimps, mantis shrimps, true crabs and hermit crabs (Those species not listed as CMUS)	Crustaceans.
		Hydrozoans, Bryzoans.
	black-lip pearl oyster	*Pinctada margaritifera.*
	other clams	Other Bivalves.
	sea squirts	Tunicates.
	sponges	Porifera.

tako, he`e	octopi	Cephalopods.
	sea snails	Gastropoda.
	sea slugs	Opistobranchs.
Limu	seaweed	Algae.
		Live rock.
	segmented worms (Those species not listed as CHCRT)	Annelids.
All other Hawaii coral reef ecosystem MUS that are marine plants, invertebrates, and fishes that are not listed in the Hawaii CHCRT table or are not Hawaii bottomfish, crustacean, precious coral, seamount groundfish or western Pacific pelagic MUS.		

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§665.222 Management area.

The Hawaii coral reef ecosystem management area is as follows:

(a) The U.S. EEZ around the Hawaiian Archipelago lying to the east of 160°50′ W. long.

(b) The inner boundary of the management area is the seaward boundary of the State of Hawaii.

(c) The outer boundary of the management area is the outer boundary of the U.S. EEZ.

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§665.223 Relation to other laws.

To ensure consistency between the management regimes of different Federal agencies with shared management responsibilities of fishery resources within the Hawaii coral reef ecosystem management area, fishing for Hawaii coral reef ecosystem MUS is not allowed within the boundary of a National Wildlife Refuge unless specifically authorized by the USFWS, regardless of whether that refuge was established by action of the President or the Secretary of the Interior.

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§665.224 Permits and fees.

(a) *Applicability.* Unless otherwise specified in this subpart, §665.13 applies to Hawaii coral reef ecosystem permits.

(1) *Special permit.* Any person of the United States fishing for, taking or retaining Hawaii coral reef ecosystem MUS must have a special permit if they, or a vessel which they operate, is used to fish for any:

(i) Hawaii coral reef ecosystem MUS in low-use MPAs as defined in §665.199;

(ii) Hawaii Potentially Harvested Coral Reef Taxa in the coral reef ecosystem management area; or

(iii) Hawaii coral reef ecosystem MUS in the coral reef ecosystem management area with any gear not specifically allowed in this subpart.

(2) *Transshipment permit.* A receiving vessel must be registered for use with a transshipment permit if that vessel is used in the Hawaii coral reef ecosystem management area to land or transship PHCRT, or any Hawaii coral reef ecosystem MUS harvested within low-use MPAs.

(3) *Exceptions.* The following persons are not required to have a permit under this section:

(i) Any person issued a permit to fish under any FEP who incidentally catches Hawaii coral reef ecosystem MUS while fishing for bottomfish MUS, crustacean MUS, western Pacific pelagic MUS, precious coral, or seamount groundfish.

(ii) Any person fishing for Hawaii CHCRT outside of an MPA, who does not retain any incidentally caught Hawaii PHCRT; and

(iii) Any person collecting marine organisms for scientific research as described in §665.17, or §600.745 of this chapter.

(b) *Validity.* Each permit will be valid for fishing only in the fishery management area specified on the permit.

(c) *General requirements.* General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits are contained in §665.13.

(d) *Special permit.* The Regional Administrator shall issue a special permit in accordance with the criteria and procedures specified in this section.

(1) *Application.* An applicant for a special or transshipment permit issued under this section must complete and submit to the Regional Administrator a Special Coral Reef Ecosystem Fishing Permit Application Form issued by NMFS. Information in the application form must include, but is not limited to a statement describing the objectives of the fishing activity for which a special permit is needed, including a general description of the expected disposition of the resources harvested under the permit (*i.e.,* stored live, fresh, frozen, preserved, sold for food, ornamental, research, or other use, and a description of the planned fishing operation, including location of fishing and gear operation, amount and species (directed and incidental) expected to be harvested and estimated habitat and protected species impacts).

(2) *Incomplete applications.* The Regional Administrator may request from an applicant additional information necessary to make the determinations required under this section. An applicant will be notified of an incomplete application within 10 working days of receipt of the application. An incomplete application will not be considered until corrected in writing.

(3) *Issuance.* (i) If an application contains all of the required information, the Regional Administrator will forward copies of the application within 30 days to the Council, the USCG, the fishery management agency of the affected state, and other interested parties who have identified themselves to the Council, and the USFWS.

(ii) Within 60 days following receipt of a complete application, the Regional Administrator will consult with the Council through its Executive Director, USFWS, and the Director of the affected state fishery

management agency concerning the permit application and will receive their recommendations for approval or disapproval of the application based on:

(A) Information provided by the applicant;

(B) The current domestic annual harvesting and processing capacity of the directed and incidental species for which a special permit is being requested;

(C) The current status of resources to be harvested in relation to the overfishing definition in the FEP;

(D) Estimated ecosystem, habitat, and protected species impacts of the proposed activity; and

(E) Other biological and ecological information relevant to the proposal. The applicant will be provided with an opportunity to appear in support of the application.

(iii) Following a review of the Council's recommendation and supporting rationale, the Regional Administrator may:

(A) Concur with the Council's recommendation and, after finding that it is consistent with the goals and objectives of the FEP, the national standards, the Endangered Species Act, and other applicable laws, approve or deny a special permit; or

(B) Reject the Council's recommendation, in which case, written reasons will be provided by the Regional Administrator to the Council for the rejection.

(iv) If the Regional Administrator does not receive a recommendation from the Council within 60 days of Council receipt of the permit application, the Regional Administrator can make a determination of approval or denial independently.

(v) Within 30 working days after the consultation in paragraph (d)(3)(ii) of this section, or as soon as practicable thereafter, NMFS will notify the applicant in writing of the decision to grant or deny the special permit and, if denied, the reasons for the denial. Grounds for denial of a special permit include the following:

(A) The applicant has failed to disclose material information required, or has made false statements as to any material fact, in connection with his or her application.

(B) According to the best scientific information available, the directed or incidental catch in the season or location specified under the permit would detrimentally affect any coral reef resource or coral reef ecosystem in a significant way, including, but not limited to, issues related to spawning grounds or seasons, protected species interactions, EFH, and habitat areas of particular concern (HAPC).

(C) Issuance of the special permit would inequitably allocate fishing privileges among domestic fishermen or would have economic allocation as its sole purpose.

(D) The method or amount of harvest in the season and/or location stated on the permit is considered inappropriate based on previous human or natural impacts in the given area.

(E) NMFS has determined that the maximum number of permits for a given area in a given season has been reached and allocating additional permits in the same area would be detrimental to the resource.

(F) The activity proposed under the special permit would create a significant enforcement problem.

(vi) The Regional Administrator may attach conditions to the special permit, if it is granted, consistent with the management objectives of the FEP, including, but not limited to:

(A) The maximum amount of each resource that can be harvested and landed during the term of the special permit, including trip limits, where appropriate.

(B) The times and places where fishing may be conducted.

(C) The type, size, and amount of gear which may be used by each vessel operated under the special permit.

(D) Data reporting requirements.

(E) Such other conditions as may be necessary to ensure compliance with the purposes of the special permit consistent with the objectives of the FEP.

(4) *Appeals of permit actions.* (i) Except as provided in subpart D of 15 CFR part 904, any applicant for a permit or a permit holder may appeal the granting, denial, conditioning, or suspension of their permit or a permit affecting their interests to the Regional Administrator. In order to be considered by the Regional Administrator, such appeal must be in writing, must state the action(s) appealed, and the reasons therefore, and must be submitted within 30 days of the original action(s) by the Regional Administrator. The appellant may request an informal hearing on the appeal.

(ii) Upon receipt of an appeal authorized by this section, the Regional Administrator will notify the permit applicant, or permit holder as appropriate, and will request such additional information in such form as will allow action upon the appeal. Upon receipt of sufficient information, the Regional Administrator will rule on the appeal in accordance with the permit eligibility criteria set forth in this section and the FEP, as appropriate, based on information relative to the application on file at NMFS and the Council and any additional information, the summary record kept of any hearing and the hearing officer's recommended decision, if any, and such other considerations as deemed appropriate. The Regional Administrator will notify all interested persons of the decision, and the reasons therefore, in writing, normally within 30 days of the receipt of sufficient information, unless additional time is needed for a hearing.

(iii) If a hearing is requested, or if the Regional Administrator determines that one is appropriate, the Regional Administrator may grant an informal hearing before a hearing officer designated for that purpose after first giving notice of the time, place, and subject matter of the hearing in the FEDERAL REGISTER. Such a hearing shall normally be held no later than 30 days following publication of the notice in the FEDERAL REGISTER, unless the hearing officer extends the time for reasons deemed equitable. The appellant, the applicant (if different), and, at the discretion of the hearing officer, other interested parties, may appear personally and/or be represented by counsel at the hearing and submit information and present arguments as determined appropriate by the hearing officer. Within 30 days of the last day of the hearing, the hearing officer shall recommend in writing a decision to the Regional Administrator.

(iv) The Regional Administrator may adopt the hearing officer's recommended decision, in whole or in part, or may reject or modify it. In any event, the Regional Administrator will notify interested persons of the decision, and the reason(s) therefore, in writing, within 30 days of receipt of the hearing officer's recommended decision. The Regional Administrator's action constitutes final action for the agency for the purposes of the Administrative Procedure Act.

(5) Any time limit prescribed in this section may be extended for good cause, for a period not to exceed 30 days, by the Regional Administrator, either upon his or her own motion or upon written request from the Council, appellant or applicant stating the reason(s) therefore.

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§665.225 Prohibitions.

In addition to the general prohibitions specified in §600.725 of this chapter and §665.15 of this part, it is unlawful for any person to do any of the following:

(a) Fish for, take, retain, possess or land any Hawaii coral reef ecosystem MUS in any low-use MPA as defined in §665.199 unless:

(1) A valid permit has been issued for the hand harvester or the fishing vessel operator that specifies the applicable area of harvest;

(2) A permit is not required, as outlined in §665.224; or

(3) The Hawaii coral reef ecosystem MUS possessed on board the vessel originated outside the management area and this can be demonstrated through receipts of purchase, invoices, fishing logbooks or other documentation.

(b) Fish for, take, or retain any Hawaii coral reef ecosystem MUS species:

(1) That is determined overfished with subsequent rulemaking by the Regional Administrator.

(2) By means of gear or methods prohibited under §665.227.

(3) In a low-use MPA without a valid special permit.

(4) In violation of any permit issued under §§665.13 or 665.224.

(c) Fish for, take, or retain any wild live rock or live hard coral except under a valid special permit for scientific research, aquaculture seed stock collection or traditional and ceremonial purposes by indigenous people.

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§665.226 Notifications.

Any special permit holder subject to the requirements of this subpart must contact the appropriate NMFS enforcement agent in American Samoa, Guam, or Hawaii at least 24 hours before landing any Hawaii coral reef ecosystem MUS unit species harvested under a special permit, and report the port and the approximate date and time at which the catch will be landed.

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§665.227 Allowable gear and gear restrictions.

(a) Hawaii coral reef ecosystem MUS may be taken only with the following allowable gear and methods:

(1) Hand harvest;

(2) Spear;

(3) Slurp gun;

(4) Hand net/dip net;

(5) Hoop net for Kona crab;

(6) Throw net;

(7) Barrier net;

(8) Surround/purse net that is attended at all times;

(9) Hook-and-line (includes handline (powered or not), rod-and-reel, and trolling);

(10) Crab and fish traps with vessel ID number affixed; and

(11) Remote-operating vehicles/submersibles.

(b) Hawaii coral reef ecosystem MUS may not be taken by means of poisons, explosives, or intoxicating substances. Possession or use of these materials by any permit holder under this subpart who is established to be fishing for Hawaii coral reef ecosystem MUS in the Hawaii management area is prohibited.

(c) Existing FEP fisheries shall follow the allowable gear and methods outlined in their respective plans.

(d) Any person who intends to fish with new gear not included in this section must describe the new gear and its method of deployment in the special permit application. A decision on the permissibility of this gear type will be made by the Regional Administrator after consultation with the Council and the director of the affected state fishery management agency.

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§665.228 Gear identification.

(a) The vessel number must be affixed to all fish and crab traps on board the vessel or deployed in the water by any vessel or person holding a permit under §§665.13 or 665.224 or that is otherwise established to be fishing for Hawaii coral reef ecosystem MUS in the Hawaii management area.

(b) *Enforcement action.* (1) Traps not marked in compliance with paragraph (a) of this section and found deployed in the Hawaii coral reef ecosystem management area will be considered unclaimed or abandoned property, and may be disposed of in any manner considered appropriate by NMFS or an authorized officer.

(2) Unattended surround nets or bait seine nets found deployed in the Hawaii coral reef ecosystem management area will be considered unclaimed or abandoned property, and may be disposed of in any manner considered appropriate by NMFS or an authorized officer.

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§§665.229-665.239 [Reserved]

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§665.240 Hawaii crustacean fisheries. [Reserved]

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§665.241 Definitions.

As used in §§665.240 through 665.259:

Hawaii crustacean management area is divided into the following areas:

(1) *Crustacean Permit Area 1 (Permit Area 1)* means the EEZ around the NWHI.

(2) *Crustacean Permit Area 2 (Permit Area 2)* means the EEZ around the MHI.

(3) *Crustacean Permit Area 1 VMS Subarea* means an area within the EEZ around the NWHI 50 nm from the center geographical positions of the islands and reefs in the NWHI as follows:

Name	N. lat.	W. long.
Nihoa Island	23°05′	161°55′
Necker Island	23°35′	164°40′
French Frigate Shoals	23°45′	166°15′
Gardner Pinnacles	25°00′	168°00′
Maro Reef	25°25′	170°35′
Laysan Island	25°45′	171°45′
Lisianski Island	26°00′	173°55′
Pearl and Hermes Reef	27°50′	175°50′
Midway Island	28°14′	177°22′
Kure Island	28°25′	178°20′

The remainder of the VMS subarea is delimited by parallel lines tangent to and connecting the 50-nm areas around the following: from Nihoa Island to Necker Island; from French Frigate Shoals to Gardner Pinnacles; from Gardner Pinnacles to Maro Reef; from Laysan Island to Lisianski Island; and from Lisianski Island to Pearl and Hermes Reef.

Hawaii crustacean management unit species (Hawaii crustacean MUS) means the following crustaceans:

Local name	English common name	Scientific name
Ula	spiny lobster	*Panulirus marginatus, Panulirus penicillatus.*
ula papapa	slipper lobster	Scyllaridae.
papa`i kua loa	Kona crab	*Ranina ranina.*
	deepwater shrimp	*Heterocarpus* spp.

Interested parties means the State of Hawaii Department of Land and Natural Resources, the Council, holders of permits issued under §665.242, and any person who has notified the Regional Administrator of his or her interest in the procedures and decisions described in §665.248, and who has specifically requested to be considered an "interested party."

Lobster grounds refers, singularly or collectively, to the following four areas in Crustacean Permit Area 1 that shall be used to manage the lobster fishery:

(1) Necker Island Lobster Grounds—waters bounded by straight lines connecting the following coordinates in the order presented: 24°00′ N. lat., 165°00′ W. long.; 24°00′ N. lat., 164°00′ W. long.; 23°00′ N. lat., 164°00′ W. long.; and 23°00′ N. lat., 165°00′ W. long.

(2) Gardner Pinnacles Lobster Grounds—waters bounded by straight lines connecting the following coordinates in the order presented: 25°20′ N. lat., 168°20′ W. long.; 25°20′ N. lat., 167°40′ W. long.; 24°20′ N. lat., 167°40′ W. long.; and 24°20′ N. lat., 168°20′ W. long.

(3) Maro Reef Lobster Grounds—waters bounded by straight lines connecting the following coordinates in the order presented: 25°40′ N. lat., 171°00′ W. long.; 25°40′ N. lat., 170°20′ W. long.; 25°00′ N. lat., 170°20′ W. long.; and 25°00′ N. lat., 171°00′ W. long.

(4) General NWHI Lobster Grounds—all waters within Crustacean Permit Area 1 except for the Necker Island, Gardner Pinnacles, and Maro Reef Lobster Grounds.

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§665.242 Permits.

(a) *Applicability.* (1) The owner of any vessel used to fish for lobster in Permit Area 1 must have a limited access permit issued for such vessel.

(2) The owner of any vessel used to fish for lobster in Permit Area 2 must have a permit issued for such a vessel.

(3) The owner of any vessel used to fish for deepwater shrimp in Crustacean Permit Areas 1 or 2 must have a permit issued for that vessel.

(4) Harvest of Hawaii crustacean MUS within the Northwestern Hawaiian Islands Marine National Monument is subject to the requirements of 50 CFR part 404.

(b) *General requirements.* General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits issued under this section, as applicable, are contained in §665.13.

(c) *Application.* An application for a permit required under this section will be submitted to PIRO as described in §665.13. If the application for a limited access permit is submitted on behalf of a partnership or corporation, the application must be accompanied by a supplementary information sheet obtained from PIRO and contain the names and mailing addresses of all partners or shareholders and their respective percentage of ownership in the partnership or corporation.

(d) *Lobster Limited Access Permit Requirements.* (1) A lobster limited access permit is valid for fishing only in Crustacean Permit Area 1.

(2) Only one permit will be assigned to any vessel.

(3) No vessel owner will have permits for a single vessel to harvest lobsters in Permit Areas 1 and 2 at the same time.

(4) A maximum of 15 limited access permits can be valid at any time.

(e) *Transfer or sale of limited access permits.* (1) Permits may be transferred or sold, but no one individual, partnership, or corporation will be allowed to hold a whole or partial interest in more than one permit, except that an owner who qualifies initially for more than one permit may maintain those permits, but may not obtain additional permits. Layering of partnerships or corporations shall not insulate a permit holder from this requirement.

(2) If 50 percent or more of the ownership of a limited access permit is passed to persons other than those listed on the permit application, PIRO must be notified of the change in writing and provided copies of the appropriate documents confirming the changes within 30 days.

(3) Upon the transfer or sale of a limited access permit, a new application must be submitted by the new permit owner according to the requirements of §665.13. The transferred permit is not valid until this process is completed.

(f) *Replacement of a vessel covered by a limited access permit.* A limited access permit issued under this section may, without limitation as to frequency, be transferred by the permit holder to a replacement vessel owned by that person.

(g) *Issuance of limited access permits to future applicants.* (1) The Regional Administrator may issue limited access permits under this section when fewer than 15 vessel owners hold active permits.

(2) When the Regional Administrator has determined that limited access permits may be issued to new persons, a notice shall be placed in the FEDERAL REGISTER, and other means will be used to notify

prospective applicants of the opportunity to obtain permits under the limited access management program.

(3) A period of 90 days will be provided after publication of the FEDERAL REGISTER notice for submission of new applications for a limited access permit.

(4) Limited access permits issued under this paragraph (g) will be issued first to applicants qualifying under paragraph (g)(4)(i) of this section. If the number of limited access permits available is greater than the number of applicants that qualify under paragraph (g)(4)(i) of this section, then limited access permits will be issued to applicants under paragraph (g)(4)(ii) of this section.

(i) First priority to receive limited access permits under this paragraph (g) goes to owners of vessels that were used to land lobster from Permit Area 1 during the period 1983 through 1990, and who were excluded from the fishery by implementation of the limited access system. If there are insufficient permits for all such applicants, the new permits shall be issued by the Regional Administrator through a lottery.

(ii) Second priority to receive limited access permits under paragraph (g) goes to owners with the most points, based upon a point system. If two or more owners have the same number of points and there are insufficient permits for all such owners, the Regional Administrator shall issue the permits through a lottery. Under the point system, limited access permits will be issued, in descending order, beginning with owners who have the most points and proceeding to owners who have the least points, based on the following:

(A) Three points shall be assigned for each calendar year after August 8, 1985, that the applicant was the operator of a vessel that was used to land lobster from Permit Area 1.

(B) Two points shall be assigned for each calendar year or partial year after August 8, 1985, that the applicant was the owner, operator, or crew member of a vessel engaged in either commercial fishing in Permit Area 2 for lobster, or fishing in Permit Area 1 for fish other than lobster with an intention to sell all or part of the catch.

(C) One point shall be assigned for each calendar year or partial year after August 8, 1985, that the applicant was the owner, operator, or crew member of a vessel engaged in any other commercial fishing in the EEZ surrounding Hawaii.

(5) A holder of a new limited access permit must own at least a 50 percent share in the vessel that the permit would cover.

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§665.243 Prohibitions.

In addition to the general prohibitions specified in 50 CFR §§600.725 and 665.15, it is unlawful for any person to do any of the following:

(a) In Permit Area 1, it is unlawful for any person to—

(1) Fish for, take, or retain lobsters—

(i) Without a limited access permit issued under §665.242.

(ii) By methods other than lobster traps or by hand for lobsters, as specified in §665.245.

(iii) From closed areas for lobsters, as specified in §665.251.

(iv) During a closed season, as specified in §665.250.

(v) After the closure date, as specified in §665.252, and until the fishery opens again in the following calendar year.

(vi) In a lobster grounds after closure of that grounds as specified in §665.252(b).

(2) Fail to report before landing or offloading as specified in §665.244.

(3) Fail to comply with any protective measures implemented under §665.248.

(4) Leave a trap unattended in the Hawaii crustacean management area except as provided in §665.245.

(5) Maintain on board the vessel or in the water more than 1,200 traps per fishing vessel, of which no more than 1,100 can be assembled traps, as specified in §665.245.

(6) Land lobsters taken in Permit Area 1 after the closure date, as specified in §665.252, until the fishery opens again the following year.

(7) Refuse to make available to an authorized officer and employee of NMFS designated by the Regional Administrator for inspection and copying any records that must be made available in accordance with §665.14(g)(2).

(8) Possess on a fishing vessel that has a limited access permit issued under §665.242 any lobster trap in Crustacean Permit Area 1 when fishing for lobster is prohibited as specified in §§665.248, 665.250(a), or 665.252, or except as allowed under §665.245(a)(7).

(9) Possess on a fishing vessel that has a limited access permit issued under this subpart any lobster trap in Crustacean Permit Area 1 VMS Subarea when fishing for lobsters is prohibited as specified in §§665.248, 665.250(a), or 665.252, except as allowed under §665.245(a)(8).

(10) Interfere with, tamper with, alter, damage, disable, or impede the operation of a VMS unit or to attempt any of the same while engaged in the Permit Area 1 fishery; or to move or remove a VMS unit while engaged in the Permit Area 1 fishery without first notifying the Regional Administrator.

(11) Make a false statement, oral or written, to the Regional Administrator or an authorized officer, regarding the certification, use, operation, or maintenance of a VMS unit used in the fishery.

(12) Fail to allow an authorized officer to inspect and certify a VMS unit used in the fishery.

(13) Possess, on a fishing vessel that has a limited access permit issued under this subpart, any lobster trap in a lobster grounds that is closed under §665.252(b), unless the vessel has an operational VMS unit, certified by NMFS, on board.

(b) In Permit Area 2, it is unlawful for any person to—

(1) Fish for, take, or retain lobsters—

(i) By methods other than lobster traps or by hand, as specified in §665.245; or

(ii) During a closed season, as specified in §665.250(b).

(2) Retain or possess on a fishing vessel any lobster taken in Permit Area 2 that is less than the minimum size specified in §665.249.

(3) Possess on a fishing vessel any lobster or lobster part taken in Permit Area 2 in a condition where the lobster is not whole and undamaged as specified in §665.249.

(4) Retain or possess on a fishing vessel, or remove the eggs from, any egg-bearing lobster, as specified in §665.249.

(5) Possess on a fishing vessel that has a permit for Permit Area 2 issued under this subpart any lobster trap in Permit Area 2 when fishing for lobster in the MHI is prohibited during the months of May, June, July, and August.

(c) In Crustacean Permit Areas 1 and 2, it is unlawful for any person to fish for, take, or retain deepwater shrimp without a permit issued under §665.242.

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§665.244 Notifications.

(a) The operator of any vessel subject to the requirements of this subpart must:

(1) Report, not less than 24 hours, but not more than 36 hours, before landing, the port, the approximate date and the approximate time at which spiny and slipper lobsters will be landed.

(2) Report, not less than 6 hours and not more than 12 hours before offloading, the location and time that offloading of spiny and slipper lobsters will begin.

(b) The Regional Administrator will notify permit holders of any change in the reporting method and schedule required in paragraph (a) of this section at least 30 days prior to the opening of the fishing season.

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§665.245 Gear restrictions.

(a) *Permit Area 1.* (1) Lobsters may be taken only with lobster traps or by hand. Lobsters may not be taken by means of poisons, drugs, other chemicals, spears, nets, hook, or explosives.

(2) The smallest opening of an entry way of any lobster trap may not allow any sphere or cylinder greater than 6.5 inches (16.5 cm) in diameter to pass from outside the trap to inside the trap.

(3) Each lobster trap must have a minimum of two escape vent panels that meet the following requirements:

(i) Panels must have at least four unobstructed circular holes no smaller than 67 mm in diameter, with centers at least 82 mm apart.

(ii) The lowest part of any opening in an escape vent panel must not be more than 85 mm above the floor of the trap.

(iii) Panels must be placed opposite one another in each trap.

(4) A vessel fishing for or in possession of lobster in any permit area may not have on board the vessel any trap that does not meet the requirements of paragraphs (a)(1), (2), and (3) of this section.

(5) A maximum of 1,200 traps per vessel may be maintained on board or in the water, provided that no more than 1,100 assembled traps are maintained on board or in the water. If more than 1,100 traps are maintained, the unassembled traps may be carried as spares only, in order to replace assembled traps that may be lost or become unusable.

(6) Traps shall not be left unattended in any permit area, except in the event of an emergency, in which case the vessel operator must notify the SAC of the emergency that necessitated leaving the traps on the grounds, and the location and number of the traps, within 24 hours after the vessel reaches port.

(7) A vessel whose owner has a limited access permit issued under this subpart and has an operating VMS unit certified by NMFS may enter Crustacean Permit Area 1 with lobster traps on board on or after June 25, but must remain outside the Crustacean Permit Area 1 VMS Subarea until the NWHI lobster season opens on July 1.

(8) A vessel whose owner has a limited access permit issued under this subpart and has on board an operational VMS unit certified by NMFS may transit Crustacean Permit Area 1, including Crustacean Permit Area 1 VMS Subarea, with lobster traps on board for the purpose of moving to another lobster grounds or returning to port following the closure date, as specified in §665.252, providing the vessel does not stop or fish and is making steady progress to another lobster grounds or back to port as determined by NMFS.

(9) The operator of a permitted vessel must notify the Regional Administrator or an authorized officer no later than June 15 of each year if the vessel will use a VMS unit in the fishery and allow for inspection and certification of the unit.

(b) Permit Area 2. Lobsters may be taken only with lobster traps or by hand. Lobsters may not be taken by means of poisons, drugs, other chemicals, spears, nets, hooks, or explosives.

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§665.246 Gear identification.

In Permit Area 1, the vessel's official number must be marked legibly on all traps and floats maintained on board the vessel or in the water by that vessel.

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§665.247 At-sea observer coverage.

All fishing vessels subject to §§665.240 though 665.252 and subpart A of this part must carry an observer when requested to do so by the Regional Administrator.

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§665.248 Monk seal protective measures.

(a) *General.* This section establishes a procedure that will be followed if the Regional Administrator receives a report of a monk seal death that appears to be related to the lobster fishery in Permit Area 1.

(b) *Notification.* Upon receipt of a report of a monk seal death that appears to be related to the lobster fishery, the Regional Administrator will notify all interested parties of the facts known about the incident. The Regional Administrator will also notify them that an investigation is in progress, and that, if the investigation reveals a threat of harm to the monk seal population, protective measures may be implemented.

(c) *Investigation.* (1) The Regional Administrator will investigate the incident reported and will attempt to:

(i) Verify that the incident occurred.

(ii) Determine the extent of the harm to the monk seal population.

(iii) Determine the probability of a similar incident recurring.

(iv) Determine details of the incident such as:

(A) The number of animals involved.

(B) The cause of the mortality.

(C) The age and sex of the dead animal(s).

(D) The relationship of the incident to the reproductive cycle, for example, breeding season (March-September), non-breeding season (October-February).

(E) The population estimates or counts of animals at the island where the incident occurred.

(F) Any other relevant information.

(v) Discover and evaluate any extenuating circumstances.

(vi) Evaluate any other relevant factors.

(2) The Regional Administrator will make the results of the investigation available to the interested parties and request their advice and comments.

(d) *Determination of relationship.* The Regional Administrator will review and evaluate the results of the investigation and any comments received from interested parties. If there is substantial evidence that the death of the monk seal was related to the lobster fishery, the Regional Administrator will:

(1) Advise the interested parties of his or her conclusion and the facts upon which it is based.

(2) Request from the interested parties their advice on the necessity of protective measures and suggestions for appropriate protective measures.

(e) *Determination of response.* The Regional Administrator will consider all relevant information discovered during the investigation or submitted by interested parties in deciding on the appropriate

response. Protective measures may include, but are not limited to, changes in trap design, changes in gear, closures of specific areas, or closures for specific periods of time.

(f) *Action by the Regional Administrator.* If the Regional Administrator decides that protective measures are necessary and appropriate, the Regional Administrator will prepare a document that describes the incident, the protective measures proposed, and the reasons for the protective measures; provide it to the interested parties; and request their comments.

(g) *Implementation of protective measures.* (1) If, after completing the steps described in paragraph (f) of this section, the Regional Administrator concludes that protective measures are necessary and appropriate, the Regional Administrator will recommend the protective measures to the Assistant Administrator and provide notice of this recommendation to the Chairman of the Council and the Director of the Division of Aquatic Resources, Department of Land and Natural Resources, State of Hawaii.

(2) If the Assistant Administrator concurs with the Regional Administrator's recommendation, NMFS will publish an action in the FEDERAL REGISTER that includes a description of the incident that triggered the procedure described in this section, the protective measures, and the reasons for the protective measures.

(h) *Notification of "no action."* If, at any point in the process described in this section, the Regional Administrator or Assistant Administrator decides that no further action is required, the interested parties will be notified of this decision.

(i) *Effective dates.* (1) The protective measures will take effect 10 days after the date of publication in the FEDERAL REGISTER.

(2) The protective measures will remain in effect for the shortest of the following time periods:

(i) Until the Hawaii FEP and this section are amended to respond to the problem;

(ii) Until other action that will respond to the problem is taken under the ESA;

(iii) Until the Assistant Administrator, following the procedures set forth in paragraph (j) of this section, decides that the protective measures are no longer required and repeals the measures; or

(iv) For the period of time set forth in the FEDERAL REGISTER notification, not to exceed 3 months. The measures may be renewed for 3 months after again following procedures in paragraphs (b) through (g) of this section.

(j) *Repeal.* (1) If the Assistant Administrator decides that protective measures may no longer be necessary for the protection of monk seals, the Assistant Administrator will notify the interested parties of this preliminary decision and the facts upon which it is based. The Assistant Administrator will request advice on the proposed repeal of the protective measures.

(2) The Assistant Administrator will consider all relevant information obtained by the Regional Administrator or submitted by interested parties in deciding whether to repeal the protective measures.

(3) If the Assistant Administrator decides to repeal the protective measures—

(i) Interested parties will be notified of the decision; and

(ii) Notification of repeal and the reasons for the repeal will be published in the FEDERAL REGISTER.

(k) *Monk seal emergency protective measures*—(1) *Determination of emergency.* If, at any time during the process described in paragraphs (a) through (j) of this section, the Regional Administrator determines that an emergency exists involving monk seal mortality related to the lobster fishery and that measures are needed immediately to protect the monk seal population, the Regional Administrator will—

(i) Notify the interested parties of this determination and request their immediate advice and comments.

(ii) Forward a recommendation for emergency action and any advice and comments received from interested parties to the Assistant Administrator.

(2) *Implementation of emergency measures.* If the Assistant Administrator agrees with the recommendation for emergency action—

(i) The Regional Administrator will determine the appropriate emergency protective measures.

(ii) NMFS will publish the emergency protective measures in the FEDERAL REGISTER.

(iii) The Regional Administrator will notify the interested parties of the emergency protective measures. Holders of permits to fish in Permit Area I will be notified by certified mail. Permit holders that the Regional Administrator knows are on the fishing grounds also will be notified by radio.

(3) *Effective dates.* (i) Emergency protective measures are effective against a permit holder at 12:01 a.m., local time, of the day following the day the permit holder receives actual notice of the measures.

(ii) Emergency protective measures are effective for 10 days from the day following the day the first permit holder is notified of the protective measures.

(iii) Emergency protective measures may be extended for an additional 10 days, if necessary, to allow the completion of the procedures set out in §665.252.

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§665.249 Lobster size and condition restrictions in Permit Area 2.

(a) Only spiny lobsters with a carapace length of 8.26 cm or greater may be retained (see Figure 1 to this part).

(b) Any lobster with a punctured or mutilated body, or a separated carapace and tail, may not be retained.

(c) A female lobster of any size may not be retained if it is carrying eggs externally. Eggs may not be removed from female lobsters.

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§665.250 Closed seasons.

(a) Lobster fishing is prohibited in Permit Area 1 during the months of January through June, inclusive.

(b) Lobster fishing is prohibited in Permit Area 2 during the months of May, June, July, and August.

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§665.251 Closed areas.

All lobster fishing is prohibited:

(a) Within 20 nm of Laysan Island.

(b) Within the EEZ landward of the 10-fathom curve as depicted on National Ocean Survey Charts, Numbers 19022, 19019, and 19016.

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§665.252 Harvest limitation program.

(a) *General.* Harvest guidelines for the Necker Island Lobster Grounds, Gardner Pinnacles Lobster Grounds, Maro Reef Lobster Grounds, and General NWHI Lobster Grounds for Permit Area 1 will be set annually for the calendar year and shall:

(1) Apply to the total catch of spiny and slipper lobsters.

(2) Be expressed in terms of numbers of lobsters.

(b) *Harvest guideline.* (1) The Regional Administrator shall use information from daily lobster catch reports and lobster sales reports from previous years, and may use information from research sampling and other sources to establish the annual harvest guideline in accordance with the FEP after consultation with the Council.

(2) NMFS shall publish a document indicating the annual harvest guideline in the FEDERAL REGISTER by February 28 of each year and shall use other means to notify permit holders of the harvest guideline for the year.

(3) The Regional Administrator shall determine, on the basis of the information reported to NMFS by the operator of each vessel fishing, when the harvest guideline for each lobster ground will be reached.

(4) Notice of the date when the harvest guideline for a lobster ground is expected to be reached and specification of the closure date of the lobster grounds will be provided to each permit holder and/or operator of each permitted vessel at least 24 hours in advance of the closure. After a closure, the harvest of lobster in that lobster ground is prohibited, and the possession of lobster traps on board the vessel in that lobster ground is prohibited unless allowed under §665.245(a)(8).

(5) With respect to the notification in paragraph (b)(4) of this section, NMFS shall provide each permit holder and operator of each permitted vessel with the following information, as appropriate:

(i) Determination of when the overall harvest guideline for Crustacean Permit Area 1 will be reached;

(ii) Closure date after which harvest of lobster or possession of lobster traps on board the vessel in a lobster grounds is prohibited;

(iii) Closure date after which the possession of lobster traps on board the vessel in Crustacean Permit Area 1 is prohibited by any permitted vessel that is not operating a VMS unit certified by NMFS; and

(iv) Specification of when further landings of lobster will be prohibited by permitted vessels not carrying an operational VMS unit, certified by NMFS, on board.

(c) *Monitoring and adjustment.* The operator of each vessel fishing during the open season shall report lobster catch (by species) and effort (number of trap hauls) data while at sea to NMFS in Honolulu. The Regional Administrator shall notify permit holders of the reporting method, schedule, and logistics at least 30 days prior to the opening of the fishing season.

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§§665.253-665.259 [Reserved]

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§665.260 Hawaii precious coral fisheries. [Reserved]

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§665.261 Definitions.

As used in §§665.260 through 665.270:

Hawaii precious coral management unit species (Hawaii precious coral MUS) means any coral of the genus *Corallium*in addition to the following species of corals:

English common name	Scientific name
Pink coral (also known as red coral)	*Corallium secundum, Corallium regale, Corallium laauense.*
Gold coral	*Gerardia* spp., *Callogorgia gilberti, Narella* spp., *Calyptrophora* spp.
Bamboo coral	*Lepidisis olapa, Acanella* spp.
Black coral	*Antipathes griggi, Antipathes grandis, Antipathes ulex.*

Hawaii precious coral permit area means the area encompassing the precious coral beds within the EEZ around Hawaii. Each bed is designated by a permit area code and assigned to one of the following four categories:

(1) *Established beds.* (i) Makapu'u (Oahu), Permit Area E-B-1, includes the area within a radius of 2.0 nm of a point at 21°18.0′ N. lat., 157°32.5′ W. long.

(ii) Au'au Channel (Maui), Permit Area E-B-2, includes the area west and south of a point at 21°10′ N. lat., 156°40′ W. long., and east of a point at 21° N. lat., 157° W. long., and west and north of a point at 20°45′ N. lat., 156°40′ W. long.

(2) *Conditional beds.* (i) Keahole Point (Hawaii), Permit Area C-B-1, includes the area within a radius of 0.5 nm of a point at 19°46.0′ N. lat., 156°06.0′ W. long.

(ii) Kaena Point (Oahu), Permit Area C-B-2, includes the area within a radius of 0.5 nm of a point at 21°35.4′ N. lat., 158°22.9′ W. long.

(iii) Brooks Bank, Permit Area C-B-3, includes the area within a radius of 2.0 nm of a point at 24°06.0′ N. lat., 166°48.0′ W. long.

(iv) 180 Fathom Bank, Permit Area C-B-4, N.W. of Kure Atoll, includes the area within a radius of 2.0 nm of a point at 28°50.2′ N. lat., 178°53.4′ W. long.

(3) *Refugia.* Westpac Bed, Permit Area R-1, includes the area within a radius of 2.0 nm of a point at 23°18′ N. lat., 162°35′ W. long.

(4) *Exploratory areas.* Permit Area X-P-H includes all coral beds, other than established beds, conditional beds, or refugia, in the EEZ seaward of the State of Hawaii.

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§665.262 Permits.

(a) Any vessel of the United States fishing for, taking, or retaining Hawaii precious coral MUS in any Hawaiian Archipelago precious coral permit area must have a permit issued under §665.13.

(b) Each permit will be valid for fishing only in the permit area specified on the permit. Precious Coral Permit Areas are defined in §665.261.

(c) No more than one permit will be valid for any one vessel at any one time.

(d) No more than one permit will be valid for any one person at any one time.

(e) The holder of a valid permit to fish one permit area may obtain a permit to fish another permit area only upon surrendering to the Regional Administrator any current permit for the precious coral fishery issued under §665.13.

(f) General requirements governing application information, issuance, fees, expiration, replacement, transfer, alteration, display, sanctions, and appeals for permits for the precious coral fishery are contained in §665.13.

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§665.263 Prohibitions.

In addition to the general prohibitions specified in 50 CFR 600.725 and in 665.15, it is unlawful for any person to:

(a) Use any vessel to fish for, take, retain, possess or land precious coral in any Hawaii precious coral permit area, unless a permit has been issued for that vessel and area as specified in §665.13 and that permit is on board the vessel.

(b) Fish for, take, or retain any species of Hawaii precious coral MUS in any precious coral permit area:

(1) By means of gear or methods prohibited by §665.264.

(2) In refugia specified in §665.261.

(3) In a bed for which the quota specified in §665.269 has been attained.

(4) In violation of any permit issued under §§665.13 or 665.17.

(5) In a bed that has been closed pursuant to §§665.268 or 665.270.

(c) Take and retain, possess, or land any live pink coral or live black coral from any precious coral permit area that is less than the minimum height specified in §665.265 unless:

(1) A valid EFP was issued under §665.17 for the vessel and the vessel was operating under the terms of the permit; or

(2) The coral originated outside coral beds listed in this paragraph, and this can be demonstrated through receipts of purchase, invoices, or other documentation.

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§665.264 Gear restrictions.

Only selective gear may be used to harvest coral from any precious coral permit area.

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§665.265 Size restrictions.

The height of a live coral specimen shall be determined by a straight line measurement taken from its base to its most distal extremity. The stem diameter of a living coral specimen shall be determined by measuring the greatest diameter of the stem at a point no less than 1 inch (2.54 cm) from the top surface of the living holdfast.

(a) Live pink coral harvested from any precious coral permit area must have attained a minimum height of 10 inches (25.4 cm).

(b) *Black coral.* Live black coral harvested from any precious coral permit area must have attained either a minimum stem diameter of 1 inch (2.54 cm), or a minimum height of 48 inches (122 cm).

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§665.266 Area restrictions.

Fishing for coral on the WestPac Bed is not allowed. The specific area closed to fishing is all waters within a 2-nm radius of the midpoint of 23°18.0′ N. lat., 162°35.0′ W. long.

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§665.267 Seasons.

The fishing year for precious coral begins on July 1 and ends on June 30 the following year, except at the Makapu'u and Au'au Channel Beds, which have a two-year fishing period that begins July 1 and ends June 30, two years later.

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§665.268 Closures.

(a) If the Regional Administrator determines that the harvest quota for any coral bed will be reached prior to the end of the fishing year, or the end of the 2-year fishing period at Makapu'u Bed or Au'au Channel Bed, NMFS shall publish a notice to that effect in the FEDERAL REGISTER and shall use other means to notify permit holders. Any such notice must indicate the reason for the closure, the bed being closed, and the effective date of the closure.

(b) A closure is also effective for a permit holder upon the permit holder's actual harvest of the applicable quota.

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§665.269 Quotas.

(a) *General.* The quotas limiting the amount of precious coral that may be taken in any precious coral permit area during the fishing year are listed in §665.269(d). Only live coral is counted toward the quota. The accounting period for all quotas begins July 1, 1983.

(b) *Conditional bed closure.* A conditional bed will be closed to all nonselective coral harvesting after the quota for one species of coral has been taken.

(c) *Reserves and reserve release.* The quotas for exploratory area X-P-H will be held in reserve for harvest by vessels of the United States in the following manner:

(1) At the start of the fishing year, the reserve for the Hawaii exploratory areas will equal the quota minus the estimated domestic annual harvest for that year.

(2) As soon as practicable after December 31 each year, the Regional Administrator will determine the amount harvested by vessels of the United States between July 1 and December 31 of the year that just ended on December 31.

(3) NMFS will release to TALFF an amount of Hawaii precious coral for each exploratory area equal to the quota minus two times the amount harvested by vessels of the United States in that July 1-December 31 period.

(4) NMFS will publish in the FEDERAL REGISTER a notification of the Regional Administrator's determination and a summary of the information on which it is based as soon as practicable after the determination is made.

(d) Quotas for precious coral permit areas.

Type of coral bed	Name of coral bed	Harvest quota in kilograms	Number of years

Established Beds	Au'au Channel	Black: 5,000	2
	Makapu'u	Pink: 2,000	2
		Gold: 0 (zero)	
		Bamboo: 500	2
Conditional Beds	180 Fathom Bank	Pink: 222	1
		Gold: 67	1
		Bamboo: 56	1
	Brooks Bank	Pink: 444	1
		Gold: 133	1
		Bamboo: 111	1
	Kaena Point	Pink: 67	1
		Gold: 20	1
		Bamboo: 17	1
	Keahole Point	Pink: 67	1
		Gold: 20	1
		Bamboo: 17	1
Refugia	Westpac	All: 0 (zero)	
Exploratory Area	Hawaii	1,000 per area (all species combined except black corals)	1

Notes:

1. No fishing for coral is authorized in refugia.

2. A moratorium on gold coral harvesting is in effect through June 30, 2013.

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§665.270 Gold coral harvest moratorium.

Fishing for, taking, or retaining any gold coral in any precious coral permit area is prohibited through June 30, 2018.

[78 FR 32182, May 29, 2013]

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Figure 1 to Part 665—Carapace Length of Lobsters

FIGURE 1 TO PART 665. CARAPACE LENGTH OF LOBSTERS

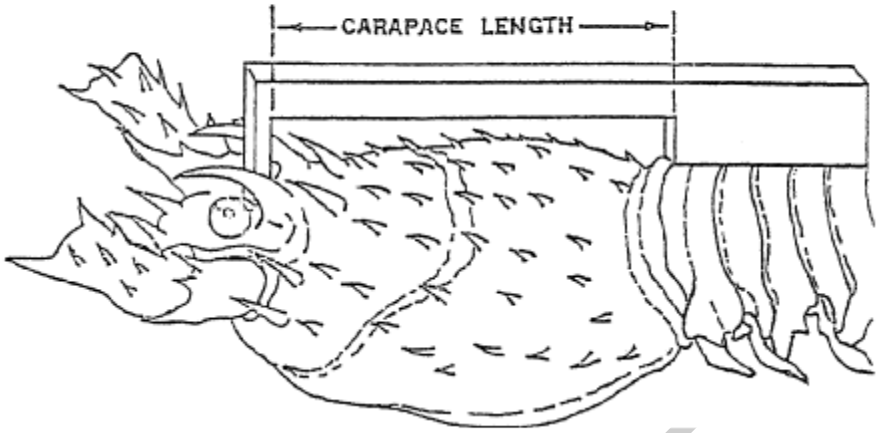

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Figure 2 to Part 665—Length of Fishing Vessels

FIGURE 2 TO PART 665. LENGTH OF FISHING VESSELS

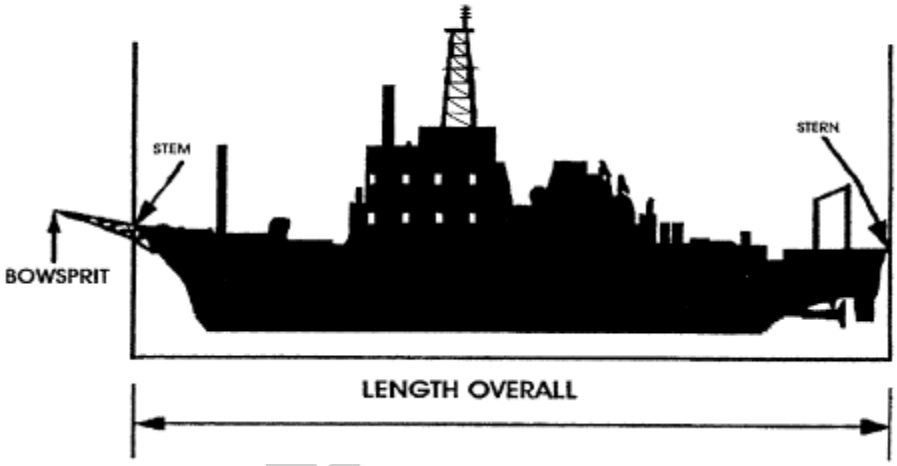

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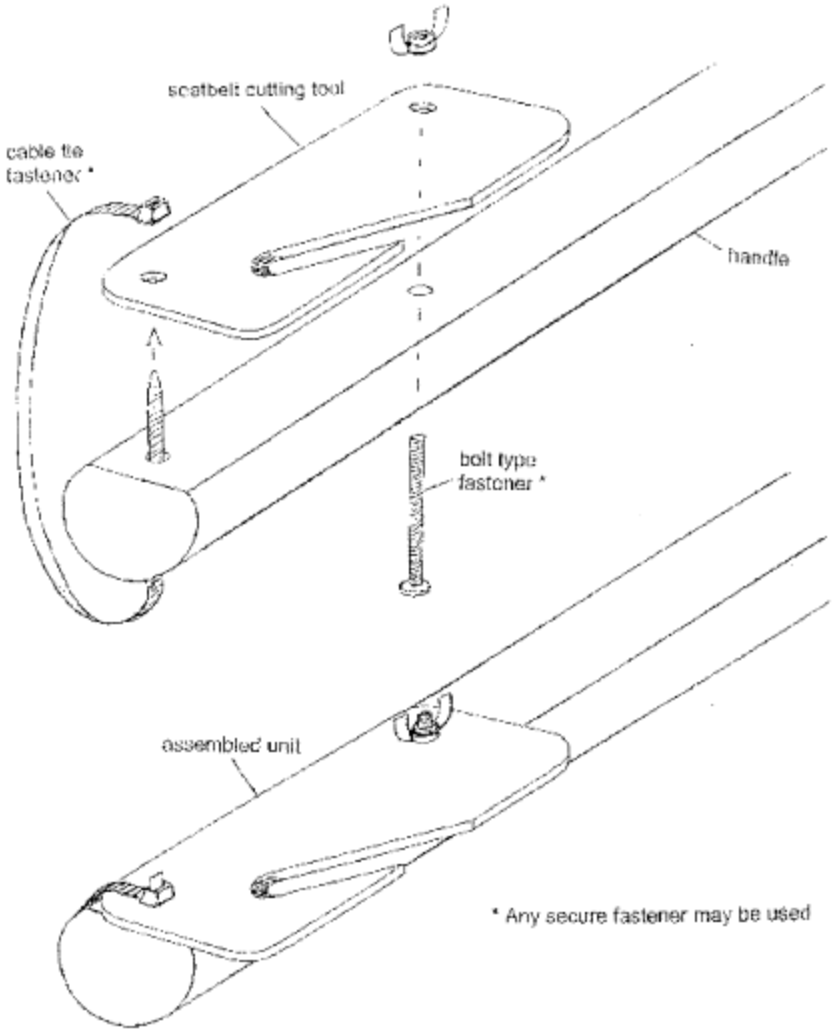
Figure 3 to Part 665—Sample Fabricated Arceneaux Line Clipper

FIGURE 3 TO PART 665. SAMPLE FABRICATED ARCENEAUX LINE CLIPPER



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Appendix D: Summary of Fishery Management Plan and Fishery Ecosystem Plan Amendments

1. Fishery Management Plan Amendments

FMP for Precious Corals of the Western Pacific Region

The fishery management plan (FMP) for Precious Coral Fisheries of the Western Pacific Region was implemented in September 1983 (48 FR 39229, September 29, 1983) and established the plan's management unit species, management areas and classified several known precious coral beds. Since 1983, the FMP has been amended seven times with each amendment summarized in **Table** 1.

Table 1. Amendments to the Precious Coral FMP

No.	Effective Date/Federal Register Notice	Action
7	8/13/08 73 FR 47098	Designated the Auau Channel bed as an established bed with a harvest quota for black coral of 5,000 kg every two years for Federal and state waters combined. Implemented a five year gold harvest moratorium for the entire region.
6	9/12/06 71 FR 53605	Included Federal waters around CNMI and the Pacific Remote Island Areas within the FMP's management area. Extended existing requirements for Federal permits and logbooks to include all harvests of precious corals in EEZ waters in these areas.
5	2/24/04 69 FR 8336	Prepared in parallel with the Coral Reef FMP. Prohibits the harvest of Precious Coral Management Unit Species in the no-take marine protected areas established under the Coral Reef FMP, including areas around Rose Atoll in American Samoa, Kingman Reef, Jarvis Island, Howland Island, and Baker Island.
4	4/19/99 64 FR 19067 8/5/03 56 FR 14866	Addressed new requirements under the 1996 Sustainable Fisheries Act (SFA). Portions of the amendment that were immediately approved included designations of essential fish habitat, definitions of overfishing and descriptions of bycatch and of some fishing communities. Those provisions became effective on February 3, 1999. Remaining provisions regarding Hawaii fishing communities became effective August 5, 2003.
3	10/19/98 63 FR 55809	Established a framework procedure for adjusting management measures in the fishery.
2	1/28/91 56 FR 3072	Defined overfishing for Established beds as: an Established bed shall be deemed overfished with respect to recruitment when the total spawning biomass (all species combined) has been reduced to 20% of its unfished condition. This definition applies to all species of precious corals and is based on cohort analysis of the pink coral, *Corallium secundum*.
1	7/21/88	Applied the management measures of the FMP to the Pacific

No.	Effective Date/Federal Register Notice	Action
	50 FR 27519	Remote Island Areas by incorporating them into a single Exploratory Permit Area, expanded the management unit species to include all species of the genus *Corallium*, and outlined provisions for the issuance of experimental fishing permits designed to stimulate the domestic fishery

In addition to FMP amendments, the management program for precious coral fisheries has been modified through several regulatory amendments and framework actions as described below.

Regulatory Amendment 1: Removed an exemption allowing fishermen who reported black coral harvest to the State of Hawaii within five years prior to April 17, 2002 to harvest black coral at a minimum base diameter of 3/4 inch. All harvest of black corals must be done at a minimum of 1 inch base diameter or 48 inch minimum height (72 FR 59259, September 14, 2007).

Framework Action 1: Revised the definitions of "live coral" and "dead coral," suspended the harvest of gold coral at Makapu'u Bed, applied minimum size restrictions only to live precious corals, prohibited the harvest of black coral with a stem diameter of less than one inch or a height of less than 48 inches (with certain exceptions), prohibited the use of non-selective fishing gear to harvest precious corals, and applied the minimum size restrictions for pink coral to all permit areas (67 FR 11941, February 16, 2002).

FMP for Crustacean Fisheries of the Western Pacific Region

The FMP for Crustacean Fisheries of the Western Pacific Region was approved in 1983. Initial provisions of the FMP, which was initially named "Spiny Lobster Fisheries of the Western Pacific Region," went into effect March 9, 1983 (48 FR 5560, 7 February 1983). The FMP implemented the following management measures for the Northwestern Hawaiian Islands (NWHI) management area: federal permit requirements, a minimum size limit for spiny lobsters, gear restrictions, a ban on the harvest of egg-bearing female spiny lobsters, the closure of waters within 20 nm of Laysan Island, all NWHI waters shallower than 10 fm, and all NWHI lagoons, to fishing for spiny lobsters, a mandatory logbook program, and a requirement to carry a fishery observer if directed by the National Marine Fisheries Service. The FMP also implemented permit, data reporting, and observer requirements within EEZ waters around the Main Hawaiian Islands (MHI), American Samoa, and Guam. Since 1983, the Crustacean FMP has been amended 13 times with each amendment summarized in **Table** 2.

Table 2. Amendments to the Crustaceans FMP

No.	Effective Date/Federal Register Notice	Action
13	11/21/08 73 FR 70603	Included the deepwater shrimp genus *Heterocarpus* as Management Unit Species (MUS) within the Crustaceans FMP. Required Federal permits and reporting for deepwater shrimp fishing in all Federal waters of the Western Pacific Region.

No.	Effective Date/Federal Register Notice	Action
12	10/26/06 71 FR 53605	Included federal waters around CNMI and the Pacific Remote Island Areas in the Crustaceans FMP and implemented federal permit and reporting requirements (71 FR 231) for vessels targeting crustacean MUS in these areas.
11	2/24/04 69 FR 8336	Prepared in parallel with the Coral Reef Ecosystems FMP. This amendment prohibits the harvest of Crustacean MUS in the no-take marine protected areas established under the Coral Reef Ecosystems FMP, including Rose Atoll in American Samoa, Kingman Reef, Jarvis Island, Howland Island, and Baker Island. The final rule implementing the Coral Reef Ecosystem FMP (including Amendment 11 to the Crustaceans FMP) became effective 3/25/04.
10	4/19/99 64 FR 19067 8/5/03 68 FR 46112	Addressed new requirements under the 1996 Sustainable Fisheries Act. Portions of the amendment that were immediately approved included designations of essential fish habitat, and descriptions of bycatch and of some fishing communities. Those provisions became effective on February 3, 1999. Remaining portions approved on August 5, 2003, included provisions regarding Hawaii fishing communities, overfishing definitions, and bycatch.
9	7/5/96 61 FR 35145	Established a system by which the annual harvest guideline would be set based on a constant percent of the population (i.e., proportional to the estimated exploitable population size) based on a specified acceptable risk of overfishing. Amendment 9 set this risk level at 10% and specified that annual harvest guidelines be published by NMFS no later than February 28 of each year. Earlier in-season adjustment procedures were eliminated. Earlier minimum size limits and prohibitions on harvesting of egg bearing females were eliminated and a mechanism was provided for certain regulatory adjustments to be made through framework procedures of the FMP.
8	11/10/94 59 FR 56004	Eliminated the NWHI minimum landings requirements for permit renewal, allowed the catch per unit effort target that is used to set the harvest guideline to be changed through the framework process, and modified reporting requirements
7	3/26/92 57 FR 10437	Established a NWHI limited access program, an adjustable fleet-wide NWHI annual harvest guideline, and a closed season (January through June) in the NWHI fishery. Participation was limited to 15 permits (and vessels). Other measures include a maximum limit on the number of traps per vessel (1,100), revisions to reporting requirements, and other provisions
6	1/28/91 56 FR 3071	Defined recruitment overfishing for lobster stocks in terms of reference points expressed in terms of the spawning potential ratio (SPR). The minimum SPR threshold, below which the stock would be considered recruitment overfished, is 20%.

No.	Effective Date/Federal Register Notice	Action
5	1987	Implemented a minimum size for slipper lobster (5.6 cm tail width), required the release of egg-bearing female slipper lobsters, required escape vents in all lobster traps, and revised some of the permit application and reporting requirements. It also changed the name of the FMP from "Spiny Lobster Fisheries" to "Crustaceans Fisheries."
4	1986	Applied existing NWHI closed areas to slipper lobsters.
3	1985	Revised the minimum spiny lobster size specifications for the NWHI management area to a limit on tail width (5.0 cm).
2	1983	Modified the allowable trap opening dimensions with the intent of minimizing the risk of harm to the Hawaiian monk seal while allowing sufficient flexibility in trap design.
1	1983	Adopted the State of Hawaii's lobster fishing regulations for the federal waters around the MHI.

In addition to FMP amendments, the management program for crustacean fisheries has been modified through several regulatory amendments described below.

Regulatory Amendment 1: Implemented VMS for the crustacean fishery in the NWHI (64 FR 36820, June 8, 1999).

Regulatory Amendment 2: Allocated 1998 NWHI lobster harvest among three individual banks and a fourth combined area (63 FR 40337, June 29, 1998).

Regulatory Amendment 3: Divided the NWHI into four fishing grounds across which harvest is allocated and allowed fishing vessels with NMFS-certified VMS to transit through fishing grounds during a closure (64 FR 36820, June 7, 1999).

FMP for Bottomfish and Seamount Groundfish of the Western Pacific Region

The FMP for Bottomfish and Seamount Groundfish Fisheries of the Western Pacific Region became effective on August 27, 1986 (51 FR 27413). Initial bottomfish fishery management measures prohibited certain destructive fishing techniques, including explosives, poisons, trawl nets, and bottom-set gillnets; established a moratorium on the commercial harvest of seamount groundfish stocks at the Hancock Seamounts, and implemented a permit system for fishing for bottomfish in the waters of the Exclusive Economic Zone (EEZ) around the Northwestern Hawaiian Islands (NWHI). The plan also established a management framework that provided for regulatory adjustments to be made, such as catch limits, size limits, area or seasonal closures, fishing effort limitations, fishing gear restrictions, access limitations, permit and/or catch reporting requirements, as well as a rules-related notice system. Since 1986, the Bottomfish and Seamount Groudfish FMP has been amended multiple times with each amendment summarized in **Tabl**e 3.

Table 3. Amendments to the Bottomfish and Seamount Groundfish FMP.

No.	Effective Date/Federal Register Notice	Action
14	4/04/08 73 FR 18450	Addressed bottomfish overfishing in the Hawaiian Archipelago by implementing a total allowable catch limit (TAC), federal non-commercial permits and reporting requirements, non-commercial bag limits and a closed season for fishing for Deep 7 species in the Main Hawaiian Islands. It also defined the Main Hawaiian Islands bottomfish fishing year as September 1-August 31, and became effective April 1, 2008 (73 FR 18450) with the permit and reporting requirements effective as of August 18, 2008 (73 FR 41296).
11-13		Amendments 11-13 were intended to address various issues which have now become moot due to changing circumstances.
10	12/12/08 73 FR 75615	Prohibited commercial fishing for bottomfish from vessels greater than 40' long in waters 0-10 miles around the Southern Islands of CNMI and 0-10 miles around the Northern Island of Alamagan. Commercial bottomfishing vessels over 40' long must carry active VMS units owned, installed, and maintained by NMFS. Also, the operators of all vessels commercially fishing for bottomfish in EEZ waters around CNMI must obtain federal permits and complete federal logbooks.
9	11/02/06 71 FR 67774	Prohibited vessels greater than 50' long from targeting Bottomfish species within 50 miles of Guam and required these vessels to obtain federal permits and to submit federal logbooks effective December 4, 2006 (71 FR 69496).
8	9/12/06 71 FR 53605	Included federal waters around CNMI and the Pacific Remote Island Areas in the Bottomfish FMP. Implemented federal permitting and reporting requirements for bottomfish fishing in the PRIA effective 1/2/07 (71 FR 69496).
7	2/24/04 69 FR 8336	Developed in parallel with the Coral Reef Ecosystems FMP. Prohibited harvest of Bottomfish and Seamount Groundfish Management Unit Species (MUS) in the no-take marine protected areas established under the Coral Reef Ecosystems FMP. The Coral Reef Ecosystems established such areas around Rose Atoll in American Samoa, Kingman Reef, Jarvis Island, Howland Island, and Baker Island. The final rule implementing the Coral Reef Ecosystem FMP (including Amendment 7 to the Bottomfish FMP) became effective 3/25/04.
6	4/19/99 64 FR19067 8/5/03 68 FR 46112	Addressed new requirements under the 1996 Sustainable Fisheries Act. Portions of the amendment that were immediately approved included designations of essential fish habitat, and descriptions of bycatch and of some fishing communities. Those provisions became effective on 2/3/99. Remaining portions approved on 8/5/03, included provisions regarding Hawaii fishing communities, overfishing definitions, and bycatch.
5	4/28/99	Established a limited entry program for the Mau Zone in the NWHI

No.	Effective Date/Federal Register Notice	Action
	64 FR 22810	with non-transferable permits and landing requirements for permit renewal. Included in requirements was attendance by the primary vessel operator at a protected species workshop. Also reserved 20% of Mau Zone permits a Western Pacific Community Development Program (CDP), as well as instituting a maximum vessel length of 60' for replacement vessels in the Hoomalu or Mau Zones
4	5/30/91 56 FR 24351	Implemented a requirement for vessel owners or operators to notify NMFS at least 72 hours before leaving port if they intend to fish in a "protected species study zone" that extends 50 nautical miles (nm) around the NWHI to allow federal observers to be placed on board bottomfish vessels to record interactions with protected species if this action is deemed necessary
3	1/16/91 56 FR 2503	Defined recruitment overfishing as a condition in which the ratio of the spawning stock biomass per recruit at the current level of fishing to the spawning stock biomass per recruit that would occur in the absence of fishing is equal to or less than 20%. Amendment 3 also delineated a process by which overfishing would be monitored and evaluated.
2	9/6/88 53 FR 29907	Divided the EEZ around the NWHI into the Hoomalu and Mau zones. A vessel limited access system was established for the Ho'omalu Zone, with non-transferable permits and landing requirements for permit renewal and for new entry into the fishery. Access to the Mau Zone was left unrestricted, except for vessels permitted to fish in the Hoomalu Zone.
1	11/11/87 52 FR 38102	Established a system to allow implementation of limited access systems for bottomfish fisheries in EEZ waters around American Samoa and Guam within the framework measures of the FMP.

FMP for Pelagic Fisheries of the Western Pacific Region

The FMP for Pelagic Fisheries of the Western Pacific Region became effective on March 23, 1987 (52 FR 5987). The Pelagic Management Unit Species (PMUS) at that time were billfish, wahoo, mahimahi, and oceanic sharks. The FMP's first measures prohibited drift gillnet fishing within the region's waters of the U.S. EEZ and prohibited foreign longline fishing within certain areas of the EEZ. Since 1987, the Pelagic FMP has been amended multiple times with each amendment summarized in **Table** 4.

Table 4. Amendments to the Pelagic FMP.

No.	Effective Date/Federal Register Notice	Action

No.	Effective Date/Federal Register Notice	Action
18	12/10/09 74 FR 65460	Removed 2,120 set limit for Hawaii-based shallow-set longline fishery. Implemented a new loggerhead sea turtle hard cap of 46 annual interactions.
16-17		Was intended to address issues which have now become moot due to changing circumstances.
15	11/21/08 73 FR 70600	Added the following pelagic squid species to the FMP: *Ommastrephes bartramii*, *Thysanoteuthis rhombus*, and *Sthenoteuthis oualaniensis*. Also, required owners of U.S. vessels greater than 50 ft in length overall that fish for pelagic squid in U.S. EEZ of the western Pacific to obtain Federal permits under the Pelagics Fishery Management Plan, to carry Federal observers if requested by NMFS, and to report any Pacific pelagic squid catch and effort either in Federal logbooks or via existing local reporting systems.
14	6/18/07 72 FR 33442	Partially approved by NMFS. This amendment contained recommendations regarding international and domestic management, including a mechanism by which the Council could participate in international negotiations regarding these stocks. Amendment 14 contained measures to implement control dates for Hawaii's non-longline commercial pelagic vessels (70 FR 47781) and purse seine and longline vessels (70 FR 47782), as well as requirements for federal permits and reporting for Hawaii-based non-longline commercial pelagic vessels. NMFS disapproved the Amendment's international measures as premature. NMFS disapproved the domestic permit and reporting requirements as duplicative of existing State requirements. NMFS noted that Amendment 14 met the requirements of the Magnuson-Act regarding overfishing.
12-13		Was intended to address issues which have now become moot due to changing circumstances.
11	5/24/05 70 FR 29646	Effective August 1, 2005, Amendment 11 established a limited access system for pelagic longlining in EEZ waters around American Samoa. Longline vessel operators were required to obtain federal permits, to complete federal logbooks, to carry and use vessel monitoring systems installed, owned and operated by NFMS on vessels greater than 40 ft in length, to carry federal observers if requested by NMFS, and to follow sea turtle handling and resuscitation requirements.
10	2/24/04 69 FR 8336	Amendment 10 prohibits the harvest of Pelagic Management Unit Species in the no-take marine protected areas established under the Coral Reef Ecosystems FMP. The Coral Reef FMP establishes such areas around Rose Atoll in American Samoa, Kingman Reef, Jarvis Island, Howland Island, and Baker Island. The final rule implementing the Coral Reef Ecosystem FMP includes Amendment

No.	Effective Date/Federal Register Notice	Action
		10 to the Pelagics FMP.
9		Was intended to address issues which have now become moot due to changing circumstances.
8	4/19/99 64 FR 19067 8/5/03 68 FR 46112	Addressed new requirements under the 1996 Sustainable Fisheries Act. Portions of the amendment that were immediately approved (4/19/99) included designations of essential fish habitat and descriptions of some fishing communities. Remaining portions were provisions regarding Hawaii fishing communities, overfishing definitions, and bycatch (approved 8/5/03).
7	5/24/94 59 FR 26979	Replaced Amendment 4 moratorium with a limited entry program for Hawaii-based domestic longline fishery with transferable permits, a limit of 164 vessels, and a maximum vessel size of 101' in length overall. It also established a framework procedure for use with implementation of certain new regulations.
6	11/2/92 57 FR 36637	Specified that all tuna species are designated as fish under U.S. management authority and included tunas and related species as Pelagic Management Unit Species under the FMP. It also applied the longline exclusion zones of 50 nm around the island of Guam and the 25-75 nm zone around the MHI to foreign vessels.
5	3/2/92 57 FR 7661	Created a domestic longline vessel exclusion zone around the Main Hawaiian Islands (MHI) ranging from 50 to 75 nm, and a similar 50 nm exclusion zone around Guam and its offshore banks. A seasonal reduction in the size of the closure was implemented in October 1992; between October and January longline fishing is prohibited within 25 nm of the windward shores of all Main Hawaiian Islands except Oahu, where it is prohibited within 50 nm from the shore.
4	10/14/91 56 FR 52214	Created a 50 nm longline exclusion zone around the NWHI to protect endangered Hawaiian monk seals. It also implemented framework provisions for establishing a mandatory observer program to collect information on interactions between longline fishing and sea turtles.
3	10/14/91 56 FR 52214	Created a 50 nm longline exclusion zone around the NWHI to protect endangered Hawaiian monk seals. It also implemented framework provisions for establishing a mandatory observer program to collect information on interactions between longline fishing and sea turtles.
2	5/26/91 56 FR 24731	Implemented requirements for domestic pelagic longline fishing and transhipment vessel operators to have Federal permits, maintain Federal fishing logbooks, and, if fishing within 50 nm of the Northwestern Hawaiian Islands, to have observers on board if directed by NMFS. It required longline gear to be marked with the official number of the permitted vessel, and incorporated waters of the EEZ around CNMI into the area managed under the FMP.

No.	Effective Date/Federal Register Notice	Action
1	3/1/91 56 FR 9686	Defined recruitment overfishing for each PMUS. Defined the optimum yield for PMUS.

In addition to FMP amendments, the management program for pelagic fisheries has been modified through several regulatory amendments and framework actions described below.

Regulatory Amendment 1: Incorporated reasonable and prudent alternative of the March 2001 Biological Opinion issued by NMFS. This amendment prohibited shallow set pelagic longlining north of the equator and closed waters between 0° and 15° N from April-May annually to longline fishing. It instituted sea turtle handling requirements for all vessels using hooks to target pelagic species in the region's EEZ waters and extended the protected species workshop requirement to include the operators of vessels registered to longline general permits (67 FR 40232, May 8, 2002**)**.

Regulatory Amendment 2: Established Federal permit and reporting requirements for any vessel using troll or handline gear to catch PMUS in EEZ waters around the Pacific Remote Island Areas of Kingman Reef, Howland, Baker, Jarvis, Johnston and Wake Islands, and Palmyra and Midway Atolls (67 FR 59813, September 3, 2002)

Regulatory Amendment 3: Implemented measures for the longline fisheries to achieve optimum yield while not jeopardizing the long term existence of sea turtles and other listed species. The amendment established a limited Hawaii-based shallow-set swordfish fishery using circle hooks with mackerel bait. Fishing effort in the shallow-set swordfish fishery was limited to 50% of the 1994-1999 annual average number of sets (just over 2,100 sets) allocated between fishermen applying to participate in the fishery. A 'hard' limit on the number of leatherback (16) and loggerhead (17) turtle interactions that could occur in the swordfish fishery was implemented; the fishery closed for the remainder of the calendar year if either limit was reached. The amendment re-implemented earlier sea turtle handling and resuscitation requirements and included conservation projects to protect sea turtles in their nesting and coastal habitats. This rule implemented the requirement for night setting imposed by the USFWS Biological Opinion on Hawaii-based longline vessels targeting swordfish north of 23 degrees north latitude (69 FR 17329, April 2, 2004**)**.

Regulatory Amendment 4: Included measures to minimize turtle interactions by non-Hawaii based domestic longline vessels operating in the Western Pacific under general longline permits. Vessels with longline general permits making shallow sets north of the equator were required to use 18/0 circle hooks with mackerel-type bait and dehookers to release any accidentally caught turtles. The amendment required vessel operators and owners with general longline permits to annually attend protected species training workshops. Operators of vessels with general longline permits were required to carry and use specific mitigation gear to aid release of sea turtles accidentally hooked or entangled by longlines. This amendment required operators of non-longline pelagic vessels (e.g. trollers and handliners) to follow handling guidelines and remove trailing gear wherever they fish (70 FR 69282, November 14, 2005).

Regulatory Amendment 5: Allowed operators of Hawaii-based longline vessels fishing north of 23 degrees north latitude, as well as those targeting swordfish south of 23 degrees north, to utilize side-setting to reduce seabird interactions in lieu of the seabird mitigation measures required by Framework Measure 1 (70 FR 75075, December 17, 2005).

Regulatory Amendment 6: Removed the seven day delay in effectiveness when closing the Hawaii based shallow-set longline fishery as a result of reaching interaction limits for sea turtles, allowing instead for an immediate closure of the fishery (72 FR 8289, February 26, 2007).

Regulatory Amendment 7: Provided pelagic fishery participants the option of using NMFS approved electronic logbooks in lieu of paper logbooks (72 FR 19123, April 16, 2007)

Framework Amendment 1: Prohibited fishing for pelagic species by vessels greater than 50 ft in length overall within EEZ waters 0-50 nm around the islands of American Samoa. Exception: vessels that landed PMUS in American Samoa under a Federal longline general permit prior to November 13, 1997 (67 FR 4369, January 30, 2002)

Framework Amendment 2: Incorporated terms and conditions developed by the Council and contained in the November 28, 2000 USFWS seabird Biological Opinion requiring Hawaii-based pelagic longline vessel operators to use blue-dyed bait, strategic offal discards, and line shooters with weighted branch lines when fishing north of 23° N. Also included requirement that all Hawaii-based longline vessel owners and operators annually attend a protected species workshop conducted by NMFS (67 FR 34408, May 12, 2002)

FMP for Coral Reef Ecosystem Fisheries of the Western Pacific Region

The FMP for Coral Reef Ecosystems of the Western Pacific Region was partially approved on June 14, 2002. NMFS disapproved a portion of the plan that governs fishing in the Northwestern Hawaiian Islands (NWHI) west of 160°50' W. long. because it would be inconsistent with or duplicate certain provisions of Executive Orders 13178 and 13196, which together established the NWHI Coral Reef Ecosystem Reserve. A final rule implementing the Coral Reef Ecosystem FMP was published on February 24, 2004 (69 FR 8336). The FMP is the nation's first ecosystem-based plan for fisheries and includes specific measures to promote sustainable fisheries while providing for substantial protection of coral reef ecosystem resources and habitats throughout the Council's jurisdiction. The management measures of the Coral Reef Ecosystems FMP:

- Established a network of marine protected areas (MPA) in the Pacific Remote Island Areas (PRIA). Howland, Baker, Jarvis Islands, Rose Atoll, and Kingman Reef have been designated as no-take MPAs. Palmyra and Johnston Atolls, and Wake Islands are designated as low-use MPAs where fishing is allowed under special fishing permits. Both no-take and low-use MPAs were proposed for the NWHI in the FMP, but were disapproved by NMFS;
- Requires a special permit and federal reporting system for controlling and monitoring the harvest of certain coral reef ecosystem management unit species (MUS) for which there is little or no information. Special permits are also required to fish in all areas designated as low-use MPAs. The FMP also uses data collected under existing local reporting systems to monitor the harvest of currently fished coral reef ecosystem MUS;
- Prohibits the use of destructive and non-selective fishing gears;

- Prohibits harvesting of coral and live rock, but allow limited take under the special permit system for collection of seed stock by aquaculture operations, and religious/cultural use by indigenous peoples;
- Incorporates an adaptive management approach using a framework process for rapid regulatory modifications in the event of major changes within coral reef ecosystems or coral reef fisheries;
- Considers and take into account in management, the historical and cultural dependence of coral reef resources by indigenous people and;
- Identifies and prioritize coral reef related research needs for each island area, including socio-economic and cultural research for future potential allocation of resources.

Since its implementation in 2004, the Coral Reef FMP has not been amended.

2. Fishery Ecosystem Plan Amendments

Omnibus Amendment: Community Development Program Process, 9/3/10

The Council amended all FEPs to establish eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation. A second final rule was published 11/05/10 in which OMB approved the collection-of-information requirements (75 FR 68199).

Omnibus Amendment: Establish a Western Pacific Region Process for Specifying Annual Catch Limits and Accountability Measures, 6/27/11

The Council amended all FEPs to establish the mechanism the Council will use to specify ACLs and AMs for each FEP fishery. Specifically, the proposed action described in this document consists of three components that would: 1) in each FEP, establish a mechanism the Council will use to determine ACLs and AMs , including a process for setting acceptable biological catch limits (ABCs); 2) adopt the ecosystem component (EC) species classification described in the NMFS advisory guidelines for National Standard 1 (NS1) so the Council can develop specific criteria for identifying EC species in subsequent amendments to the FEPs; and 3) identify pelagic management unit species that have statutory exceptions to the ACL and AM requirements.

Amendment to the Pacific Pelagic, American Samoa, Mariana, and Pacific Remote Island Area FEPs: Fishery Management in the Marianas Trench, Pacific Remote Islands, and Rose Atoll Marine National Monuments,

The Council amended the Pacific Pelagics, American Samoa, Pacific Remote Island Areas, and the Mariana Islands FEPs, to establish certain provisions relating to non-commercial fishing practices. Consistent with the monument Proclamations, the amendments:

- Codified the boundaries of the Monuments and their various management units.
- Implemented the prohibition on commercial fishing at Rose Atoll and PRI Monuments, and in the Islands Unit of the Marianas Trench Monument.

- Established management measures for non-commercial and recreational fishing in the Monuments including, but not limited to:
    - Requiring Federal permits and reporting for non-commercial and recreational charter fishing to aid in the monitoring of fishing activities.
    - Limiting fishing permit eligibility to residents and businesses of local fishing communities in the Rose Atoll Monument and Marianas Trench Monument, Islands Unit.
    - Allowing customary exchange in non-commercial fishing in the Marianas Trench Islands Unit and Rose Atoll Monuments to help preserve traditional indigenous and cultural fishing practices.
    - Defining customary exchange as the non-market exchange of marine resources between fishermen and community residents for goods, services, and/or social support for cultural, social or religious reasons, and may include cost recovery through monetary reimbursements and other means for actual trip expenses (ice, bait, food, or fuel) that may be necessary to participate in fisheries in the western Pacific. Customary exchange of fish harvested in the Monuments includes family and friends of residents of the fishing communities.
    - Prohibiting all fishing within 12 nautical miles (nm) of the Pacific Remote Islands, subject to USFWS's authority to allow non-commercial fishing, in consultation with NMFS and the Council.
    - Prohibit all fishing within 12 nm around Rose Atoll.
- Prohibited the conduct of commercial fishing outside of a monument, and noncommercial fishing within a monument, on the same trip.

Amendment 2 to the Pacific Pelagic FEP: Establishment of Longline Prohibited Areas in the Mariana Archipelago, 3/4/2011

The Council amended the Pacific Pelagic FEP to establish a 30 mile longline fishing prohibited areas in the CNMI to promote sustained participation in fishing by Guam and CNMI fishing communities.

Amendment 5 to the Pacific Pelagic FEP: Measures to Reduce Interactions between the American Samoa Longline Fishery and Green Sea Turtles, 8/24/11

The American Samoa longline fishery has been observed to interact with (hook or entangle) with green sea turtles (Chelonia mydas) which are listed as threatened under the Endangered Species Act. To address this issue, the Council amended the Pelagics FEP to provide for the longterm survival, recovery, and sustainability of the sea turtles by reducing the number of sea turtle interactions with the fishery.

Amendment 7 to the Pacific Pelagic FEP: Use and Assignment of Catch and Effort Limits of Pelagic Management Unit Species by the U.S. Pacific Island Territories. 3/28/14

Amendment 7 establishes a management framework and process for specifying fishing catch and effort limits and accountability measures for pelagic fisheries in the U.S. Pacific territories (American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands). The framework authorizes the government of each territory to allocate a portion of its specified catch or effort limit to a U.S. fishing vessel or vessels through a specified fishing agreement, and

establish criteria, which a specified fishing agreement must satisfy. The framework also includes measures to ensure accountability for adhering to fishing catch and effort limits.

Table 5. Amendments to the Fishery Ecosystem Plans (post-2009).

FEP	No.	Effective Date/Federal Register Notice	Action
AS	1	6/27/11 76 FR 37285	Omnibus amendment. Establishes eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation. . A second final rule was published 11/05/10 in which OMB approved the collection-of-information requirements (75 FR 68199).
AS	2	09/03/10 75 FR 54044	Omnibus amendment that establishes a mechanism for specifying annual catch limits.
HI	1	09/03/10 75 FR 54044	Omnibus amendment. Establishes eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation. A second final rule was published 11/05/10 in which OMB approved the collection-of-information requirements (75 FR 68199).
HI	2	11/10/10 75 FR 69015	Establishes the Hancock Seamounts Ecosystem Management Area as well as continues the moratorium on armorhead and other seamount groundfish until the armorhead stock is rebuilt.
HI	3	6/27/11 76 FR 37285	Omnibus amendment that establishes a mechanism for specifying annual catch limits
MA	1	09/03/10 75 FR 54044	Omnibus amendment. Establishes eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation. A second final rule was published 11/05/10 in which OMB approved the collection-of-information requirements (75 FR 68199).
MA	2	6/27/11 76 FR 37285	Omnibus amendment that establishes a mechanism for specifying Annual Catch Limits.
PRIA	1	6/27/11	Omnibus amendment that establishes a mechanism for

FEP	No.	Effective Date/Federal Register Notice	Action
		76 FR 37285	specifying annual catch limits.
PRIA	2	6/03/13 78 FR 32996	Establishes management measures for non-commercial and recreational fishing within the Pacific Remote Islands Marine National Monument; prohibits commercial fishing within monument
PEL	1	09/03/10 75 FR 54044	Eligibility requirements and procedures for reviewing and approving community development plans. The intent is to promote participation of island communities in fisheries that they traditionally depend on, but may not have the capabilities to support continued and substantial participation.
PEL	2	Disapproval: 7/11/11 76 FR 40764	Establishes a purse seine area closure in American Samoa. The purse seine area closure was disapproved.
PEL	3	6/27/11 76 FR 37287	Establishes a purse seine area closure and longline area closure in CNMI. The final rule only approved the longline closure.
PEL	4	6/27/11 76 FR 37285	Omnibus amendment that establishes a mechanism for specifying annual catch limits.
PEL	5	8/24/11 76 FR 52888	American Samoa longline gear configuration modifications to reduce sea turtle interactions.
PEL	6		
PEL	7		Catch and effort limits for the US Participating Territories; Specification of annual bigeye tuna catch limits for the US Participating Territories.

Appendix E: MSY Control Rule & Stock Status Determination Criteria and Process for Specifying Annual Catch Limits and Accountability Measures

MSY Control Rule and Stock Status Determination Criteria

A MSY control rule is a control rule that specifies the relationship of F to B or other indicator of productive capacity under an MSY harvest policy. Because fisheries must be managed to achieve optimum yield, not MSY, the MSY control rule is a benchmark control rule rather than an operational one. However, the MSY control rule is useful for specifying the "objective and measurable criteria for identifying when the fishery to which the plan applies is overfished" that are required under the MSA. The National Standard Guidelines (74 FR 3178) refer to these criteria as "status determination criteria" and state that they must include two limit reference points, or thresholds: one for F that identifies when overfishing is occurring and a second for B or its proxy that indicates when the stock is overfished.

The status determination criterion for F is the maximum fishing mortality threshold (MFMT). Minimum stock size threshold (MSST) is the criterion for B. If fishing mortality exceeds the MFMT for a period of one year or more, overfishing is occurring. A stock or stock complex is considered overfished when its biomass has declined below a level that jeopardizes the capacity of the stock to produce MSY on a continuing basis (i.e., the biomass falls below MSST). A Council must take remedial action in the form of a new FMP, an FMP amendment, or proposed regulations within two years following notification by the Secretary of Commerce that overfishing is occurring, a stock or stock complex is overfished or approaching an overfished condition[1] or existing remedial action to end previously identified overfishing or to rebuild an overfished stock has not resulted in adequate progress.

The National Standard Guidelines state that the MFMT may be expressed as a single number or as a function of some measure of the stock's productive capacity. Guidance in Restrepo et al. (1998:17) regarding specification of the MFMT is based on the premise that the MSY control rule constitutes the MFMT. In the example in Figure 1 the MSY control rule sets the MFMT constant at F_{MSY} for values of B greater than the MSST and decreases the MFMT linearly with biomass for values of B less than the MSST. This is the default MSY control rule recommended in Restrepo et al. (1998). Again, if F is greater than the MFMT for a period of one year or more, overfishing is occurring.

The National Standard Guidelines state that to the extent possible, the MSST should equal whichever of the following is greater: One-half the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock or stock complex were exploited at the MFMT. The MSST is indicated in Figure 1 by a vertical line at a biomass level somewhat less than B_{MSY}. A specification of MSST below B_{MSY} would allow

[1] A stock or stock complex is approaching an overfished condition when it is projected that there is more than a 50 percent chance that the biomass of the stock or stock complex will decline below MSST within two years (74 FR 3178).

for some natural fluctuation of biomass above and below B_{MSY}, which would be expected under, for example, an MSY harvest policy. Again, if B falls below MSST the stock is overfished.

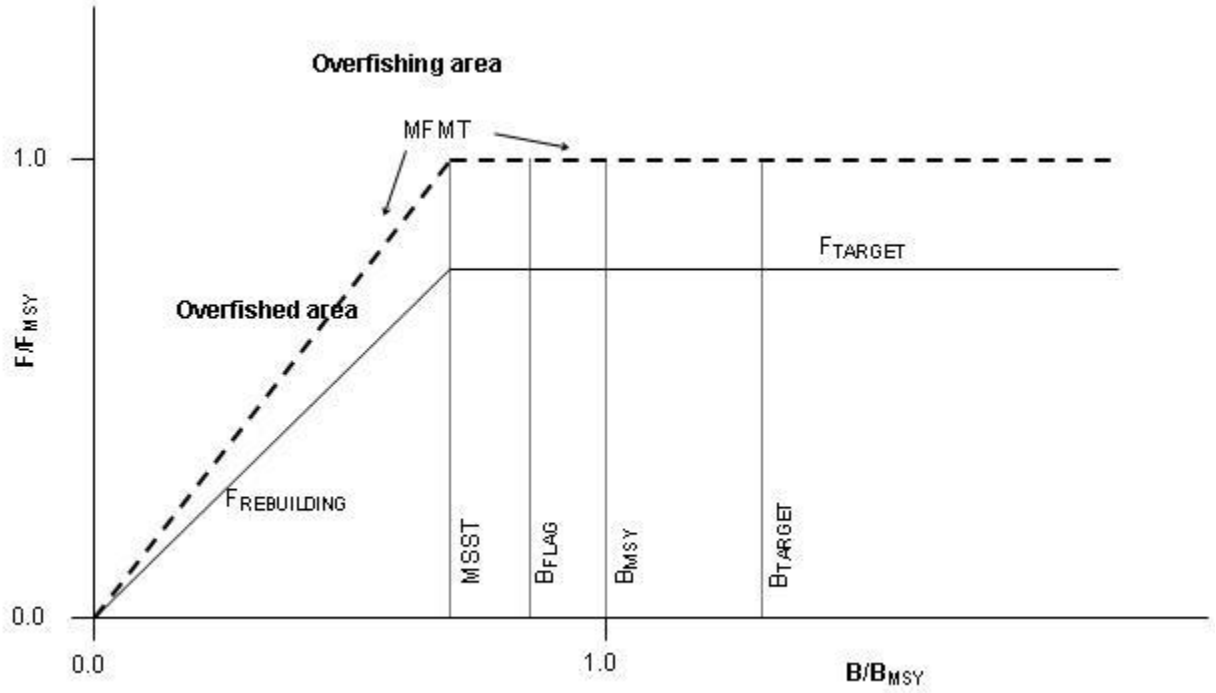

Figure 1. Example of MSY, Target and Rebuilding Control Rules
Source: Restrepo et al. 1998

Warning reference points comprise a category of reference points that will be considered in this FEP together with the required thresholds. Although not required under the MSA, warning reference points could be specified in order to provide warning in advance of B or F approaching or reaching their respective thresholds. Considered in this FEP is a stock biomass flag (B_{FLAG}) that would be specified at some point above MSST, as indicated in Figure 1. The control rule would not call for any change in F as a result of breaching B_{FLAG} – it would merely serve as a trigger for consideration of action or perhaps preparatory steps towards such action. Intermediate reference points set above the thresholds could also be specified in order to trigger changes in F – in other words, the MFMT could have additional inflection points.

Target Control Rule and Reference Points

A target control rule specifies the relationship of F to B for a harvest policy aimed at achieving a given target. Optimum yield (OY) is one such target, and National Standard 1 requires that conservation and management measures both prevent overfishing and achieve OY on a continuing basis. Optimum yield is the yield that will provide the greatest overall benefits to the nation, and is prescribed on the basis of MSY, as reduced by any relevant economic, social, or ecological factor. MSY is therefore an upper limit for OY.

A target control rule can be specified using reference points similar to those used in the MSY control rule, such as F_{TARGET} and B_{TARGET}. For example, the recommended default in Restrepo et al. (1998) for the target fishing mortality rate for certain situations (ignoring all economic, social, and ecological factors except the need to be cautious with respect to the thresholds) is 75 percent of the MFMT, as indicated in Figure 1. Simulation results using a deterministic model have shown that fishing at 0.75 F_{MSY} would tend to result in equilibrium biomass levels between 1.25 and 1.31 B_{MSY} and equilibrium yields of 0.94 MSY or higher (Mace 1994).

It is emphasized that while MSST and MFMT are limits, the target reference points are merely targets. They are guidelines for management action, not constraints. For example Restrepo et al. (1998) state that target reference points should not be exceeded more than 50% of the time, nor on average.

Rebuilding Control Rule and Reference Points

If it has been determined that overfishing is occurring, a stock or stock complex is overfished or approaching an overfished condition, or existing remedial action to end previously identified overfishing or to rebuild an overfished stock has not resulted in adequate progress, the Council must take remedial action within two years. In the case that a stock or stock complex is overfished (i.e., biomass falls below MSST in a given year), the action must be taken through a stock rebuilding plan (which is essentially a rebuilding control rule as supported by various analyses) with the purpose of rebuilding the stock or stock complex to the MSY level (B_{MSY}) within an appropriate time frame, as required by MSA §304(e)(4). The details of such a plan, including specification of the time period for rebuilding, would take into account the best available information regarding a number of biological, social, and economic factors, as required by the MSA and National Standard Guidelines.

If B falls below MSST, management of the fishery would shift from using the target control rule to the rebuilding control rule. Under the rebuilding control rule in the example in Figure 1, F would be controlled as a linear function of B until B recovers to MSST (see $F_{REBUILDING}$), then held constant at F_{TARGET} until B recovers to B_{MSY}. At that point, rebuilding would have been achieved and management would shift back to using the target control rule (F set at F_{TARGET}). The target and rebuilding control rules "overlap" for values of B between MSST and the rebuilding target (B_{MSY}). In that range of B, the rebuilding control rule is used only in the case that B is recovering from having fallen below MSST. In the example in Figure 1 the two rules are identical in that range of B (but they do not need to be), so the two rules can be considered a single, integrated, target control rule for all values of B.

Measures to Prevent Overfishing and Overfished Stocks

The control rules specify how fishing mortality will be controlled in response to observed changes in stock biomass or its proxies. Implicitly associated with those control rules are management actions that would be taken in order to manipulate fishing mortality according to the rules. In the case of a fishery which has been determined to be "approaching an overfished condition or is overfished," MSA §303(a)(10) requires that the FMP "contain conservation and management measures to prevent overfishing or end overfishing and rebuild the fishery."

Use of National Standard 1 Guidelines in FEPs
This FEP carries forward the provisions pertaining to compliance with the Sustainable Fisheries Act which were recommended by the Council and subsequently approved by NMFS (68 FR 16754, April 7, 2003). Because biological and fishery data are limited for all species managed by this FEP, MSY-based control rules and overfishing thresholds are specified for multi-species stock complexes.

Process for Specifying Annual Catch Limits (ACLs) and Accountability Measures (AMs)

In 2012, a mechanism for specifying ACLs was established in the FEPs for American Samoa, Hawaii, the Mariana Archipelago, the Pacific Remote Island Areas, and western Pacific Pelagic fisheries. The ACL mechanism included a tiered system of ABC control rules that the SSC applies to calculate ABC. Included in this is a qualitative method the Council employed to determine an appropriate P* (P* denotes risk of overfishing) value for each fishery. The ACL mechanism also includes methods for determining ACLs and AMs for stocks and stock complexes in the fishery. ACLs and AMs developed by the Council are specified by the agency prior to the start of each fishing year. Figure 2 illustrates the method for specifying ACLs, including the procedures for calculating ABC and setting ACL and AMs that are all described in this section.

Calculation of the Acceptable Biological Catch

This section describes how the ABC is calculated and set compared to the OFL using ABC control rules that account for the level of scientific knowledge about the stock or stock complex, scientific uncertainty in the estimate of OFL, and other scientific information. This section also discusses how the acceptable risk of overfishing (P*) is factored into the ABC control rule and how P* is determined.

Tiered System of ABC Control Rules
For stocks and stock complexes required to have an ABC, the Council utilizes a five-tiered system of ABC control rules that allows for different levels of scientific information to be considered when calculating ABC. The control rules are organized from data rich down to data poor, with Tier 1 being the highest (data rich) and Tier 5 being the lowest (data poor). Tiers 1-2 involve data rich to data moderate situations and include levels of uncertainty derived from model-based stock assessments. Tiers 3-5 involve data poor situations and include levels of uncertainty derived from ad-hoc procedures including simulation models or expert opinion.

When calculating an ABC for a stock or stock complex, the SSC first evaluate the information available for the stock and assign the stock or stock complex into one of the five tiers. The SSC then applies the control rule assigned to that tier to determine the ABC. The SSC may recommend an ABC that differs from the result of the control rule calculation based on factors such as data uncertainty, recruitment variability, declining trends in population variables, and other factors determined relevant by the SSC, but must explain their rationale. The tiered system of ABC control rules are described below.

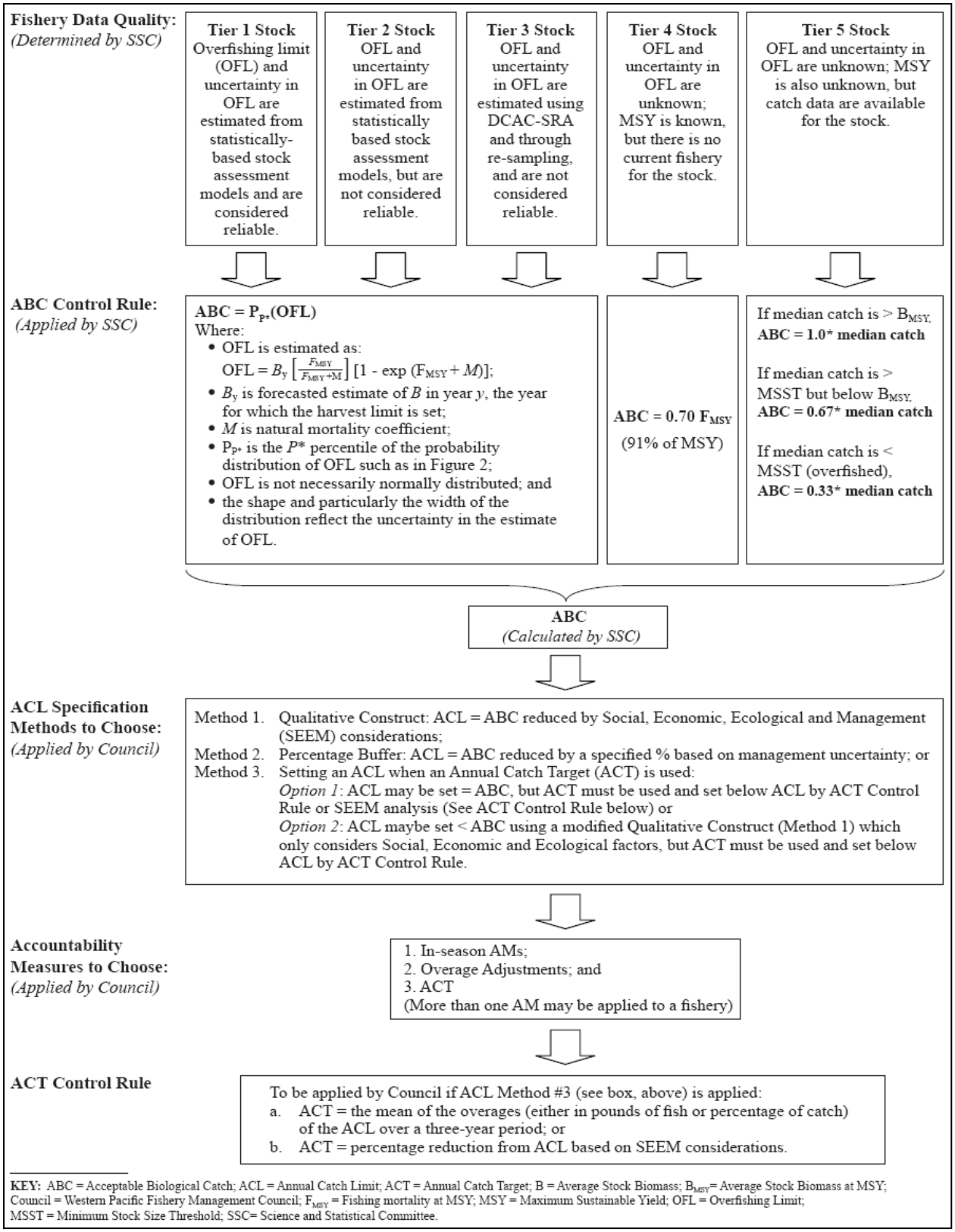

Figure 2. Schematic of method for specifying ABC, ACL and AMs, including ACTs.

Tier 1. Model-Based Probabilistic Approach to Estimating ABCs
In this tier, the data used are reliable and complete enough to be able to utilize statistical-based stock assessment models (e.g., Stock Synthesis 2 (or 3), Multifan-CL (MFCL), C++ Algorithmic Stock Assessment Laboratory (CASAL), and Bayesian production models). From these stock assessments, reliable estimates of MSY, F_{MSY}, B_{MSY}, and B_t are available. Of special relevance to being included in this tier, measures of the uncertainty of F_{MSY}, B_t and B_{t+k} and OFL_{t+k} must be available directly.

In plain English:

ABC is the maximum value for which the probability "p" of exceeding OFL is less than P*.

Or, in conceptual mathematical terms:

ABC = max (x | p(x > OFL) < P*)

Or, as commonly estimated:

ABC = P_{P*}(OFL)
Where:

- OFL is estimated as $\text{OFL} = B_y \left[\frac{F_{\text{MSY}}}{F_{\text{MSY}}+M}\right][1 - \exp(F_{\text{MSY}} + M)]$;
- B_y is forecasted estimate of *B* in year *y*, the year for which the harvest limit is set;
- *M* is natural mortality coefficient;
- P_{P*} is the P* percentile of the probability distribution of OFL such as in Figure 2;
- OFL is not necessarily normally distributed; and
- the shape and particularly the width of the distribution reflect the uncertainty in the estimate of OFL.

The Council must advise the SSC on the acceptable P* to use prior to calculating and recommending the ABC. If the SSC determines that the uncertainty of OFL is underestimated (due to underestimating the uncertainty of F_{MSY} and/or the forecasted estimated B_t), the SSC could appropriately rescale the width of the OFL distribution.

Tier 2. Quasi-Probabilistic Approach to Estimating ABCs
The key difference between assessments in Tier 1 and Tier 2 is that in Tier 2, measures of uncertainty of OFL are not as reliable or are not available from a single, integrated stock assessment model. Reliable data must still be available to be in included in this tier, but those used are obtained through some separate analysis or analyses. The methods often involve re-sampling or ad hoc methods. While the statistical-based model characteristic of Tier 1 can occur here, the common assessments are Yield-per-Recruit (Y/R) and Spawning-per-Recruit (SPR). Such assessments involve the use of F_{MSY} proxies, usually $F_{30\%}$ and $F_{60\%}$. The data in Tier 2 may not be as reliable or complete as in Tier 1, though still of sufficient quality to provide fully usable stock assessments.

$F_{30\%}$ = Fishing at the rate that reduces spawning biomass per recruit to 30% of the unfished value. Used as a substitute for F_{MSY} when using Y/R and SPR stock assessments. $F_{60\%}$, as well as others, has also commonly been used.

ABC is estimated using the equation in Tier 1 above, with the uncertainty estimates coming from re-sampling (i.e. method for estimating and re-estimating probability distributions such as bootstrapping). The Council must advise the SSC on the acceptable P* to use prior to calculating and recommending the ABC.

Tier 3. Data-poor Probabilistic Approach to Setting ABCs

In this tier, the available data are not sufficient for the use of model-based assessment tools. Data are sufficient to apply the data limited approaches such as (but not limited to) Depletion-Corrected Average Catch (DCAC) (MacCall 2009), Stock Reduction Analysis (DCAC-SRA) (Dick and MacCall 2011), Catch-MSY (Martell and Froese 2012), Biomass-augmented catch-MSY (Sabater and Kleiber 2014) with information on the biology of the stock, or DCAC, in which there is some estimate of natural mortality (M), but other life history information is lacking. For a comprehensive list of data limited approaches see Carruthers et al 2014. In these circumstances, the uncertainty of OFL (the probability distribution of OFL) can be estimated using the Monte Carlo simulation (i.e. a technique that uses algorithms that rely on repeated random sampling to compute results). These tools are to be applied to long-lived species where the natural mortality coefficient M should be less than 0.20 and recruitment should not be highly episodic.

ABC is estimated using the equation in Tier 1 above, with the uncertainty estimates established by the Monte Carlo simulation. Again, the Council must advise the SSC on the acceptable P* to use prior to calculating and recommending the ABC.

Tier 4. ABC Control Rule for Species without Current Harvest

This ABC control rule is for species or species assemblages with stock assessments and/or MSY estimates, but no current harvest, such as deepwater shrimp (*Heterocarpus*). The ABC is set at 0.70 F_{MSY} (= yield 91% OFL = 91% MSY = ABC; see Walters et al. 2005) as a precautionary measure to maximize yield while minimizing biomass impacts and accounting for scientific uncertainty. An alternative target fishing mortality value may be specified if additional data or modeling is available to support it, or the Council chooses to be more precautionary.

Walters et al. (2005) provided an example through the modeling tool, ECOSIM, in which k = 0.7 represents a precautionary factor in setting the target fishing mortality (F_{MSY}), which is predicted to have little impact on yield. When k = 0.7, the ECOSIM simulations implied a sustainable yield of around 0.9 MSY. "k" is a factor that a fishery modeler can vary to represent varying levels of precaution for F_{MSY} within the ECOSIM model. Similarly, NMFS Technical Guidance on implementing NS1 by Restrepo et al. (1998) recommended a default fishing mortality target of 25% below MFMT, or 0.75 F_{MSY}, which results in an equilibrium yield of 94% MSY or higher. This Tier 4 control rule adopted by the WPFMC is more precautionary than the control rule recommended by Restrepo et al. (1998) and in line with the results of Walters et al. (2005). As Tier 4 involves a fishery with no current harvest, this ABC control rule does not include

consideration of P*; however if harvest occurs, the fishery may be moved into higher tier where P* would be need to be considered.

Tier 5. Data-poor Ad-hoc Approach to Setting ABCs
In this tier, catches may be small and/or the catch history may contain gaps or be too variable. Catch history may also be lacking in consistently stable periods or periods with consistent trends for using DCAC-SRA or DCAC. Hence, there is no basis for estimating a reliable MSY or OFL.

For these data poor fisheries, a multiplier of the long-term median catch history will be used. The multiplier will be determined by the biological knowledge of the stock or stock complex, in light of the guidance provided by Restrepo et al. *(Section 2.2.2: Data Poor Situations*). The guidance recommends that the default control rule be implemented by multiplying the average catch from a time period where there is no quantitative or qualitative evidence of declining abundance ("Recent Catch") by a factor based on a qualitative estimate of relative stock size. The following guidelines were provided:

Above B_{MSY}	Limit catch = 1.00*Recent Catch
Above MSST but below B_{MSY}	Limit catch = 0.67*Recent Catch
Below MSST (i.e. overfished)	Limit catch = 0.33*Recent Catch

However, Restrepo et al. (1998) advises that because it will probably not be possible to analytically determine stock status relative to B_{MSY} for data poor stocks, an approach based on informed judgment will be necessary. The authors further state that "in cases of severe data limitations, qualitative approaches may be necessary, including expert opinion and consensus-building methods." As Tier 5 involves data poor situations, this ABC control rule does not include consideration of P*.

Determining the Acceptable Probability of Overfishing used in the ABC Control Rule
The ABC control rule for Tier 1-3 fisheries requires the Council to advise the SSC on the acceptable probability of overfishing (P*) in order for the SSC to calculate and recommend the ABC. As discussed above, P* refers to the acceptable probability or risk that actual catch equal to the ABC would exceed the OFL and thus, result in overfishing. NS1 guidelines require that the probability that overfishing will occur cannot exceed 50% and should be a lower value. Consequently, the Council adopted a maximum P* value of 50%; however, where adequate scientific information is available on the stock or stock complex, the Council will utilize a qualitative method for determining an appropriate P* that is lower than the maximum of 50%. This qualitative approach is described below.

Qualitative Analysis for Determining P*
The Council developed a process by which the risk of overfishing can be reduced from the 50% maximum P*. This approach, based on the approach developed by the South Atlantic FMC, is a qualitative method of determining P* that considers the amount of information available on the stock or stock complex, including scientific uncertainty, for the following dimensions: 1) assessment information, 2) assessment uncertainty, 3) stock status, and 4) productivity and susceptibility. Information on the four dimensions will be complied and analyzed by a team that may include Council and SSC members, Council staff, and other individuals knowledgeable in

the fishery, including stock assessment experts. Team members will use their knowledge and expertise to assign a single score for each dimension based on the criteria below. The maximum value for each dimension is 12.5 and the sum of the four dimensions has a maximum value of 50. The scores for each dimension will be added together for a final score, then be reduced from the maximum risk of overfishing (P^*_{MAX}) of 50. The team's analysis will be vetted through the Council process with the Council ultimately deciding the final P* value. The Council-approved P* would then be utilized in the calculation of the recommended ABC. An example of the qualitative analysis is provided below, but the exact criteria and scoring values used may change as deemed appropriate by the team for each assessed stock.

1) Assessment Information

Criteria	**Score**	
Quantitative assessment provides estimates of exploitation and B; includes MSY-derived benchmarks	0.0	
Reliable measures of exploitation or B, no MSY benchmarks, proxy reference points	2.5	X
Relative measures of exploitation or B, absolute measures of stock unavailable, proxy reference points	5.0	
Reliable catch history	7.5	
Scarce or unreliable catch records	12.5	

2) Assessment Uncertainty

Criteria	**Score**	
Complete. Key determinant – uncertainty in both assessment inputs and environmental conditions included	0.0	
High. Key determinant – reflects more than just uncertainty in future recruitment	2.5	
Medium. Uncertainties are addressed using statistical techniques and sensitivities, but full uncertainty is not carried forward in projections	5.0	X
Low. Distributions of F_{MSY} and MSY are lacking	7.5	
None. Only single point estimates; no sensitivities or uncertainty evaluations	12.5	

3) Stock Status

Criteria	**Score**	
Neither overfished nor overfishing. Stock is at high B and low exploitation relative to benchmark values	0.0	
Neither overfished nor overfishing. Stock may be in close proximity to benchmark values	2.5	X
Stock is either overfished or overfishing is occurring	5.0	
Stock is overfished and overfishing is occuring	7.5	
Either status criterion is unknown	12.5	

4) Productivity and Susceptibility

Criteria	Score	
Low risk. High productivity, low vulnerability, low susceptibility	0.0	
Medium risk. Moderate productivity, vulnerability, and susceptibility	5.0	X
High risk. Low productivity, high vulnerability, high susceptibility	12.5	

SCORE SUMMARY

Dimensions	Score
Assessment information	2.5
Assessment uncertainty	5.0
Stock status	2.5
PSA	5.0
Total Score	**15.0**
Risk of overfishing: **(P*=50 minus Total Score, where 50 equals P^*_{MAX})**	**35**

In the example above, the resulting P* of 35 could then be used in the ABC control rule equations available for stocks in any of the tiers 1 through 3. Benefits of this include the following: 1) it brings together multiple experts to determine the risk of overfishing based on their diverse knowledge; 2) it can be applied in both data rich and data poor situations, i.e. whether formal stock assessments can be conducted or not; and 3) it need not be repeated annually unless information suggests that circumstances have changed significantly.

Setting the Annual Catch Limit

NS1 guidelines require the Council to determine an ACL that may not exceed the SSC-recommended ABC; however, NS1 does not provide guidance on how to set an ACL below the SSC-recommended ABC. This section describes the methods the Council will use to set ACLs starting in 2011.

ACL will be set by the Council after considering the ABC provided by the SSC, as well as social and economic factors, pertinent ecological considerations, and management uncertainty. Management uncertainty stems from insufficient information about true catch (e.g. late reporting, underreporting and misreporting of landings), lack of management precision, and/or the ability to close a fishery before a catch limit is exceeded. NS1 guidelines suggest management uncertainty be accounted for during the establishment of AMs for a fishery, including ACTs; however, nothing precludes the Council from accounting for management uncertainty at the ACL step.

Method 1: Qualitative Construct for Setting an ACL

The ACL qualitative construct uses an approach similar to the P* qualitative construct. While the P* qualitative construct considers the amount of biological information (scientific uncertainty) available on the stock or stock complex, the ACL qualitative construct considers the amount of socio-economic information (management uncertainty) on the fishery that targets the stock or stock complex. Specifically, the dimensions that will be used for the ACL qualitative construct

would include the following factors: 1) Social; 2) Economic; 3) Ecological; and 4) Management uncertainty (SEEM). Aspects of the SEEM dimensions could include the importance of the fishery both socially and economically; consideration of the ecological importance of the stock or stock complex targeted by the fishery (e.g., is the stock a key indicator species of ecological health of the ocean), and whether managers can effectively constrain catch to planned levels.

Information on the SEEM dimensions will be compiled and analyzed by a team that may include Council and SSC members, Council staff, and other individuals knowledgeable in the fishery. This team will also be responsible for developing the criteria and scoring values regarding the quality and completeness of the information for each dimension. Like the P* qualitative construct, the scores for each dimension will be added together so that the total score is subtracted from a default value of 100% ABC (i.e., 100). Because SEEM analyses will be unique for each fishery, there are no specifics given at this time for the criteria or scoring values within the dimensions.

Method 2: Percentage Buffer for Setting an ACL

Under this method, the ACL would be set as a percentage of the ABC (e.g., ACL = 10% to 100% of the ABC) with the actual percentage dependent upon the amount of management uncertainty that exists in the fishery. For example, if management uncertainty is low, the ACL would be set close to 100% of the ABC. Alternatively, if management uncertainty is high, ACL would be set as a lower percentage. Factors that the Council will consider when selecting the percentage include late reporting, underreporting, and misreporting of landings in the fishery, as these factors contribute to the possibility that the true catch may actually exceed the ABC and ultimately the OFL of a fishery, thus resulting in overfishing. The justification for using this method over method 1 would need to be clearly identified by the Council when setting the ACL, as it is not a quantitative decision. However, it is useful to note that the ACL is a management decision for the Council to make, not necessarily a numerically-derived limit.

Method 3: Setting an ACL when an ACT will be Utilized

An ACT is an amount of annual catch of a stock or stock complex that is the management target of the fishery, and accounts for management uncertainty in controlling the actual catch at or below the ACL. When an ACT is used, it should be set lower than the ACL with a large enough buffer between the two reference points such that risk of exceeding the ACL is low. NS1 guidelines recommend ACTs in the system of accountability measures so that ACL is not exceeded. See Section 0 for a description of setting the ACT.

If the Council decides to use an ACT as a means to ensure an ACL is not exceeded, there are two options the Council may use in setting an ACL. Under the first option, the Council could simply set the ACL equal to the ABC. If this option is taken, management uncertainty will be accounted for at the ACT level using the ACT control rule. Under this option, in addition to management uncertainty, the Council could also consider social, economic and ecological factors to set the ACT and thus could apply the entire SEEM analysis described under Method 1 to set the ACT below the ACL. While NS1 guidelines do not require social, economic or ecological factors to be considered in setting the ACT, nothing precludes the Council from doing so, although the resulting ACT would be more precautionary than NS1 intends.

Under the second option, the Council would set the ACL less than the ABC using a modified Method 1 (Qualitative construct for setting ACLs) described above whereby the analysis for setting the ACL will only consider sociological, economic, and/or ecological factors. Under this option, management uncertainty will be accounted for at the ACT level using the ACT control rule (3-year running average).

As a performance measure for all ACL managed fisheries, if landings exceed the ACL for any stock or stock complex more than once in a four year period, the Council will re-evaluate the system of ACLs and AMs for the fishery and modify the system as necessary to improve its performance and effectiveness.

Suite of Accountability Measures

In addition to ACLs, the MSA also requires NMFS and the Councils to implement AMs (MSA §303(a)(15)). NS1 guidelines (74 FR 3178; January 16, 2009) explain that AMs are management controls to prevent ACLs from being exceeded and to correct or mitigate overages of the ACLs if they occur. The guidelines recommend FMPs describe AMs and how those measures are triggered. NS1 guidelines also suggest that management uncertainty be accounted for in establishing the AMs for a fishery, including uncertainty in the ability of managers to constrain catch and uncertainty in quantifying the true catch amounts. Since the purpose of ACLs and other harvest controls is to prevent overfishing, AMs are triggered at the ACL level to ensure the ABC and OFL are not exceeded and overfishing does not occur.

In fisheries for which in-season monitoring of catch is possible (i.e. fisheries with federal logbook reporting and State of Hawaii commercial fisheries, including MHI bottomfish), tracking of catch landings towards the ACL would be initiated at the start of each fishing year. When the ACL is projected to be reached, the commercial and non-commercial fishery sectors will be closed in federal waters for the remainder of the fishing year. For fisheries that rely on non-federal creel survey programs conducted by local marine resource management agencies, in-season tracking of catch landings may not be fully possible because availability of catch data is dependent upon local agencies workload and priorities. For these fisheries, the Council may employ overage adjustments as an accountability measure. If the Council determines at the end of a fishing year that total catch has exceeded the specified ACL for any fishery, the Council may reduce the ACL for the subsequent fishing year by the percentage or absolute value of the overage. However, one crucial aspect of this is that overages are typically factored into the subsequent year's stock assessment, as are any underages. For this reason, the Council will need to decide whether to include an overage adjustment if the overage has already been considered in a stock assessment, although stock assessments are typically not performed annually. However, as a performance measure for all ACL managed fisheries, if landings exceed the ACL for any stock or stock complex more than once in a four year period, the Council will re-evaluate the system of ACLs and AMs for the fishery and may modify the system as necessary to improve its performance and effectiveness.

In Method 3 of ACL specification options, ACTs may also be utilized as an accountability measure to ensure a fishery does not exceed its ACL.

The first approach utilizes an ACT control rule based on a 3-year running average of overages of a specified catch limit (e.g. TAC, quota, ACL, or ACT). The percentage or absolute value of the overage of a catch limit over a three year period will be reduced from the ACL in the following year. With this approach, if an ACL is not exceeded, a zero (0) percentage or absolute value will be attributed for that year. For example, assuming a static ACL of 100,000 pounds has been set annually for three consecutive years, and total catch exceeded the ACL in year 1 by 2,000 pounds (or 2%), year 2 by 6000 pounds (6%), and in the third year was 3000 pounds short (or 97,000 pounds), the ACT reduction would be calculated as a percentage as follows (2% + 6% + 0%)÷3 = 2.67%. In this example, ACT will be reduced by 2.67% (or 2,667 pounds) from the next 100,000 ACL, resulting in an ACT of 97,330 pounds in that following year. Alternatively, absolute values instead of a percentage could also be utilized. For example, using the same 100,000 pound ACL, the ACT would be calculated as follows: (2000 pounds + 6000 pounds + 0 pounds) ÷ 3 = 2,667 pounds, which results in that amount being reduced from the 100,000 pound ACL in the following year, or an ACT of 97,330 pounds. It is important to note, however, that assuming a static ACL for a number of years sequentially is unrealistic. More likely the ACL will vary annually due to fishery dynamics; therefore, using the percentage approach would likely be employed in these situations because this method allows the value of any overages to be standardized.

The second approach for setting an ACT is based on a percentage reduction from ACL using the SEEM analysis. This approach could be used regardless of whether an ACL is set equal to or less than the ABC. Under this approach, instead of applying the 3-year running average approach, the Council could apply the full SEEM analysis described under Method 1 to set the ACT below the ACL when the ACL equals the ABC. If ACL is set lower than the ABC because the social, ecological, and economic factors have already been taken into account, then the ACT can be set by using the 3-year running average approach described above or based on factors related to management uncertainty (i.e. the M part of the SEEM analysis).

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Appendix F: EFH Impacts Provisions

The EFH provisions of the Magnuson Stevens Act impose procedural requirements on both Councils and federal agencies related to marine planning. First, for each FMP, Councils must identify adverse impacts to EFH resulting from both fishing and non-fishing activities, and describe measures to minimize these impacts. Second, the provisions allow Councils to provide comments and make recommendations to federal or state agencies that propose actions that may affect the habitat, including EFH, of a managed species. NMFS is required to consult with federal agencies on actions that may adversely affect EFH, which usually occurs concurrently with the NEPA planning process.

None of the fisheries operating under the Hawaii Archipelago FEP are expected to have adverse impacts on EFH or HAPC for species managed under the different fisheries. Continued and future operations of fisheries under the Hawaii Archipelago FEP are not likely to lead to substantial physical, chemical, or biological alterations to the habitat, or result in loss of, or injury to, these species or their prey.

1. MSA and non-MSA fishing activities that may adversely affect EFH

The Council is required to act to prevent, mitigate, or minimize adverse effects from fishing on evidence that a fishing practice has identifiable adverse effects on EFH for any MUS covered by an FMP. Adverse fishing impacts may include physical, chemical, or biological alterations of the substrate and loss of, or injury to, benthic organisms, prey species, and their habitat or other components of the ecosystem.

The predominant fishing gear types—hook and line, longline, troll, traps—used in the fisheries managed by the Council cause few fishing-related impacts to the benthic habitat utilized by coral reef species, bottomfish, crustaceans, or precious corals. The current management regime prohibits the use of bottom trawls, bottom-set nets, explosives, and poisons. The use of non-selective gear to harvest precious corals is prohibited and only selective and non-destructive gear may be allowed to fish for Coral Reef Ecosystem MUS. Although lobster traps have a potential impact on the benthic habitat, the tropical lobster *Panulirus penicillatus* does not enter lobster traps. In the limited areas where harvesting does occur in the Hawaii Archipelago, lobsters are caught by hand. This technique causes limited damage or no fishing-related impacts to the benthic habitat, and its continued use is likely.

The Council has determined that current management measures to protect fishery habitat are adequate and that no additional measures are necessary at this time. However, the Council has identified the following potential sources of fishery-related impacts to benthic habitat that may occur during normal fishing operations:

- Anchor damage from vessels attempting to maintain position over productive fishing habitat.
- Heavy weights and line entanglement occurring during normal hook-and-line fishing operations.
- Lost gear from lobster fishing operations.

- Remotely operated vehicle (ROV) tether damage to precious coral during harvesting operations.

Trash and discarded and lost gear (leaders, hooks, weights) by fishing vessels operating in the EEZ, are a Council concern. A report on the first phase of a submersible-supported research project conducted in Hawaii in 2001 preliminarily determined that bottomfish gear exhibited minimal to no impact on the coral reef habitat (C. Kelley, personal communication). A November 2001 cruise in the Main Hawaiian Islands determined that precious corals harvesting has "negligible" impact on the habitat (R. Grigg, personal communication). The Council is concerned with habitat impacts of marine debris originating from fishing operations outside the Western Pacific Region. NMFS is currently investigating the source and impacts of this debris. International cooperation will be necessary to find solutions to this broader problem.
Because the habitat of pelagic species is the open ocean, and managed fisheries employ variants of hook-and-line gear, there are no direct impacts to EFH. Lost gear may be a hazard to some species due to entanglement, but it has no direct effect on habitat. A possible impact would be caused by fisheries that target and deplete key prey species, but currently there is no such fishery. There is also a concern that invasive marine and terrestrial species may be introduced into sensitive environments by fishing vessels transiting from populated islands and grounding on shallow reef areas. Of most concern is the potential for unintentional introduction of rats (*Rattus* spp.) to the remote islands in the NWHI and PRIA that harbor endemic land birds. Although there are no restrictions that prohibit fishing vessels from transiting near these remote island areas, no invasive species introductions due to this activity have been documented. However, the Council is concerned that this could occur as fisheries expand and emerging fisheries develop in the future.

While the Council has determined that current management measures to protect fishery habitat are adequate, should future research demonstrate a need, the Council will act accordingly to protect habitat necessary to maintain a sustainable and productive fishery in the Western Pacific Region.

In modern times, some reefs have been degraded by a range of human activities. Comprehensive lists of human threats to coral reefs in the U.S. Pacific Islands are provided by Maragos et al. (1996), Birkeland (1997a), Grigg 2002, and Clark and Gulko (1999). (These findings are summarized in Table 27.) More recently, the U.S. Coral Reef Task Force identified six key threats to coral reefs: (1) landbased sources of pollutions, (2) overfishing, (3) recreational overuse, (4) lack of awarness, (5) climate change, and (6) coral bleaching and disease. In general, reefs closest to human population centers are more heavily used and are in worse condition than those in remote locations (Green 1997). Nonetheless, it is difficult to generalize about the present condition of coral reefs in the U.S. Pacific Islands because of their broad geographic distribution and the lack of long-term monitoring to document environmental and biological baselines. Coral reef conditions and use patterns vary throughout the U.S. Pacific Islands.
A useful distinction is between coral reefs near inhabited islands of American Samoa, CNMI, Guam, and the main Hawaiian islands and coral reefs in the remote NWHI, PRIAs, and northern islands of the CNMI. Reefs near the inhabited islands are heavily used for small-scale artisanal, recreational, and subsistence fisheries, and those in Hawaii, CNMI and Guam are also the focus for extensive non-consumptive marine recreation. Rather than a relatively few large-scale mechanized operations, many fishermen each deploy more limited gear. The more accessible

banks in the main Hawaiian Islands (Penguin Bank, Kaula Rock), Guam (southern banks), and the CNMI (Esmeralda Bank, 300 Reef, Marpi Reef, Dump Coke and Malakis Reef are the most heavily fished offshore reefs in the Western Pacific Region management area.
The vast majority of the reefs in the Western Pacific Region are remote and, in some areas, they have protected status. Most of these are believed to be in good condition. Existing fisheries are limited. The major exception is in the NWHI, where there are commercial fisheries for spiny lobster and deep-slope bottomfish (Green 1997). Poaching by foreign fishing fleets is suspected at Guam's southern banks, in the PRIA, and possibly in other areas. Poachers usually target high-value and often rare or overfished coral reef resources. These activities are already illegal but difficult to detect.

2. Non-fishing related activities that may adversely affect EFH

On the basis of the guidelines established by the Secretary under Section 305 (b)(1)(A) of the MSA, NMFS has developed a set of guidelines to assist councils meet the requirement to describe adverse impacts to EFH from non-fishing activities in their FMPs (67 FR 2376). A wide range of non-fishing activities throughout the U.S. Pacific Islands contribute to EFH degradation. FEP implementation will not directly mitigate these activities. However, as already noted, it will allow NMFS and the Council to make recommendations to any federal or state agency about actions that may impact EFH. Not only could this be a mechanism to minimize the environmental impacts of agency action, it will help them focus their conservation and management efforts.

The Council is required to identify non-fishing activities that have the potential to adversely affect EFH quality and, for each activity, describe its known potential adverse impacts and the EFH most likely to be adversely affected. The descriptions should explain the mechanisms or processes that may cause the adverse effects and how these may affect habitat function. The Council considered a wide range of non-fishing activities that may threaten important properties of the habitat used by managed species and their prey, including dredging, dredge material disposal, mineral exploration, water diversion, aquaculture, wastewater discharge, oil and hazardous substance discharge, construction of fish enhancement structures, coastal development, introduction of exotic species, and agricultural practices. These activities and impacts, along with mitigation measures, are detailed in the next section.

Table 1: Threats to Coral Reefs in the Hawaiian Archipelago

Activity	**MHI**	**NWHI**
Coastal construction	x	
Destructive fishing	x	
Flooding	x	
Industrial pollution		
Overuse/over harvesting	x	
Nutrient loading (sewage/eutrophication)	x	
Soil erosion/sedimentation	x	

Vessel groundings/oil spills		x
Military activity	x	x
Hazardous waste		x
Tourist impacts	x	
Urbanization	x	
Thermal pollution	x	
Marine debris	x	x
Introduced species	x	

Sources: Birkeland 1997a; Clark and Gulko 1999; Grigg 2002; Jokiel 1999; Maragos et al. 1996

3. Cumulative Impacts Assessment

A cumulative impacts analysis (CIA) is required by the NMFS EFH Final Rule (2002) to the extent feasible and practicable. The CIA "should analyze how the cumulative impacts of fishing and non-fishing activities influence the function of EFH on an ecosystem or watershed scale" (67 FR 2378, January 17, 2002). The assessment should include multiple threats, including natural stresses.

There are a variety of past, present, and future activities that have the potential to affect EFH in the Hawaiian Archipelago. In the Main Hawaiian Islands, there has been interest in aquaculture, inter-island electricity cables, and offshore energy development as the state moves toward self-sufficiency in energy and food production. Since many water column impacts are temporary in nature, benthic alteration associated with laying cables and anchoring are most likely to have an adverse impact and pose the greatest threat to EFH for juvenile and adult life stages. Nearshore impacts associated with development have the potential to impact shallow water species. Large-scale impacts such as global climate change that affect ocean temperatures, currents, and potentially food chain dynamics are most likely to threaten EFH for egg and larval pelagic stages.

The Northwestern Hawaiian Islands are very remote. All commercial fishing for bottomfish and seamount groundfish species is under moratorium in the Hancock Seamount Ecosystem Management Area; commercial fishing is banned within the Papahānaumokuākea Marine National Monument. Activity within the Monument is generally limited to scientific research. Similar to larval and egg life stages, global environmental problems pose the largest threat to EFH in the NWHI.

Future analyses will seek to analyze cumulative impact of habitat conversion and the impacts of discharges in order to evaluate the cumulative impacts on EFH. Information and techniques that are developed for this process will be used to supplement future revisions of these EFH provisions as the information becomes available.

4. Conservation and Enhancement Recommendations

According to NMFS guidelines, Councils should describe ways to avoid, minimize, or compensate for the adverse effects to EFH and promote the conservation and enhancement of EFH. Generally, non-water dependent actions that may have adverse impacts should not be located in EFH. Activities that may result in significant adverse effects on EFH should be avoided where less environmentally harmful alternatives are available. If there are no alternatives, the impacts of these actions should be minimized. Environmentally sound engineering and management practices should be employed for all actions that may adversely affect EFH. Disposal or spillage of any material (dredge material, sludge, industrial waste, or other potentially harmful materials) that would destroy or degrade EFH should be avoided. If avoidance or minimization is not possible, or will not adequately protect EFH, compensatory mitigation to conserve and enhance EFH should be recommended. FEPs may recommend proactive measures to conserve or enhance EFH. When developing proactive measures, Councils may develop a priority ranking of the recommendations to assist federal and state agencies undertaking such measures. Councils should describe a variety of options to conserve or enhance EFH, which may include, but are not limited to the following:

Enhancement of rivers, streams, and coastal areas through new federal, state, or local government planning efforts to restore river, stream, or coastal area watersheds.

Improve water quality and quantity through the use of the best land management practices to ensure that water-quality standards at state and federal levels are met. The practices include improved sewage treatment, disposing of waste materials properly, and maintaining sufficient in-stream flow to prevent adverse effects to estuarine areas.

Restore or create habitat, or convert non-EFH to EFH, to replace lost or degraded EFH, if conditions merit such activities. However, habitat conversion at the expense of other naturally functioning systems must be justified within an ecosystem context.
Established policies and procedures of the Council and NMFS provide the framework for conserving and enhancing EFH. Components of this framework include adverse impact avoidance and minimization, provision of compensatory mitigation whenever the impact is significant and unavoidable, and incorporation of enhancement. New and expanded responsibilities contained in the MSA will be met through appropriate application of these policies and principles. In assessing the potential impacts of proposed projects, the Council and the NMFS are guided by the following general considerations:

- The extent to which the activity would directly and indirectly affect the occurrence, abundance, health, and continued existence of fishery resources.
- The extent to which the potential for cumulative impacts exists.
- The extent to which adverse impacts can be avoided through project modification, alternative site selection, or other safeguards.
- The extent to which the activity is water dependent if loss or degradation of EFH is involved.
- The extent to which mitigation may be used to offset unavoidable loss of habitat functions and values.

Seven non-fishing activities have been identified that directly or indirectly affect habitat used by MUS. Impacts and conservation measures are summarized below for each of these activities.

Although not all inclusive, what follows is a good example of the kinds of measures that can help to minimize or avoid the adverse effects of identified non-fishing activities on EFH.

- Habitat Loss and Degradation

Impacts:

- Changes in abundance of infaunal and bottom-dwelling organisms
- Turbidity plumes
- Biological availability of toxic substances
- Damage to sensitive habitats
- Current patterns/water circulation modification
- Loss of habitat function
- Contaminant runoff
- Sediment runoff
- Shoreline stabilization projects

Conservation Measures:

1. To the extent possible, fill materials resulting from dredging operations should be placed on an upland site. Fills should not be allowed in areas with subaquatic vegetation, coral reefs, or other areas of high productivity.
2. The cumulative impacts of past and current fill operations on EFH should be addressed by federal, state, and local resource management and permitting agencies and should considered in the permitting process.
3. The disposal of contaminated dredge material should not be allowed in EFH.
4. When reviewing open-water disposal permits for dredged material, state and federal agencies should identify the direct and indirect impacts such projects may have on EFH. When practicable, benthic productivity should be determined by sampling prior to any discharge of fill material. Sampling design should be developed with input from state and federal resource agencies.
5. The areal extent of the disposal site should be minimized. However, in some cases, thin layer disposal may be less deleterious. All non-avoidable impacts should be mitigated.
6. All spoil disposal permits should reference latitude–longitude coordinates of the site so that information can be incorporated into GIS systems. Inclusion of aerial photos may also be required to help geo-reference the site and evaluate impacts over time.
7. Further fills in estuaries and bays for development of commercial enterprises should be curtailed.
8. Prior to installation of any piers or docks, the presence or absence of coral reefs and submerged aquatic vegetation should be determined. These areas should be avoided. Benthic productivity should also be determined, and areas with high productivity avoided. Sampling design should be developed with input from state and federal resource agencies.
9. The use of dry stack storage is preferable to wet mooring of boats. If that method is not feasible, construction of piers, docks, and marinas should be designed to minimize impacts to the coral reef substrate and subaquatic vegetation.
10. Bioengineering should be used to protect altered shorelines. The alteration of natural, stable shorelines should be avoided.

- Pollution and Contamination

Impacts:

- Introduction of chemicals
- Introduction of animal wastes
- Increased sedimentation
- Wastewater effluent with high contaminant levels
- High nutrient levels downcurrent of outfalls
- Biocides to prevent biofouling
- Thermal effects
- Turbidity plumes
- Affected submerged aquatic vegetation sites
- Stormwater runoff
- Direct physical contact
- Indirect exposure
- Cleanup

Conservation Measures:

1. Outfall structures should be placed sufficiently far offshore to prevent discharge water from affecting areas designated as EFH. Discharges should be treated using the best available technology, including implementation of up-to-date methodologies for reducing discharges of biocides (e.g., chlorine) and other toxic substances.
2. Benthic productivity should be determined by sampling prior to any construction activity. Areas of high productivity should be avoided to the maximum extent possible. Sampling design should be developed with input from state and federal resource agencies.
3. Mitigation should be provided for the degradation or loss of habitat from placement of the outfall structure and pipeline as well as the treated water plume.
4. Containment equipment and sufficient supplies to combat spills should be on-site at all facilities that handle oil or hazardous substances.
5. Each facility should have a Spill Contingency Plan, and all employees should be trained in how to respond to a spill.
6. To the maximum extent practicable, storage of oil and hazardous substances should be located in an area that would prevent spills from reaching the aquatic environment.
7. Construction of roads and facilities adjacent to aquatic environments should include a storm-water treatment component that would filter out oils and other petroleum products.
8. The use of pesticides, herbicides, and fertilizers in areas that would allow for their entry into the aquatic environment should be avoided.
9. The best land management practices should be used to control topsoil erosion and sedimentation.

- Dredging

Impacts:

- Changes in abundance of infaunal and bottom-dwelling organisms
- Turbidity plumes
- Bioavailability of toxic substances

- Damage to sensitive habitats
- Water circulation modification

Conservation Measures:

1. To the maximum extent practicable, dredging should be avoided. Activities that require dredging (such as placement of piers, docks, marinas, etc.) should be sited in deep-water areas or designed in such a way as to alleviate the need for maintenance dredging. Projects should be permitted only for water-dependent purposes, when no feasible alternatives are available.
2. Dredging in coastal and estuarine waters should be performed during the time frame when MUS and prey species are least likely to be entrained. Dredging should be avoided in areas with submerged aquatic vegetation and coral reefs.
3. All dredging permits should reference latitude–longitude coordinates of the site so that information can be incorporated into Geographic Information Systems (GIS). Inclusion of aerial photos may also be required to help geo-reference the site and evaluate impacts over time.
4. Sediments should be tested for contaminants as per the EPA and U.S. Army Corps of Engineers requirements.
5. The cumulative impacts of past and current dredging operations on EFH should be addressed by federal, state, and local resource management and permitting agencies and should be considered in the permitting process.
6. If dredging needs are caused by excessive sedimentation in the watershed, those causes should be identified and appropriate management agencies contacted to assure action is done to curtail those causes.
7. Pipelines and accessory equipment used in conjunction with dredging operations should, to the maximum extent possible, avoid coral reefs, seagrass beds, estuarine habitats, and areas of subaquatic vegetation.

o Marine Mining

Impacts:

- Loss of habitat function
- Turbidity plumes
- Resuspension of fine-grained mineral particles
- Composition of the substrate altered

Conservation Measures:

1. Mining in areas identified as a coral reef ecosystem should be avoided.
2. Mining in areas of high biological productivity should be avoided.
3. Mitigation should be provided for loss of habitat due to mining.

o Water Intake Structures

Impacts:

- Entrapment, impingement, and entrainment
- Loss of prey species

Conservation Measures:

1. New facilities that rely on surface waters for cooling should not be located in areas where coral reef organisms are concentrated. Discharge points should be located in areas that have low concentrations of living marine resources, or they should incorporate cooling towers that employ sufficient safeguards to ensure against release of blow-down pollutants into the aquatic environment.
2. Intake structures should be designed to prevent entrainment or impingement of MUS larvae and eggs.
3. Discharge temperatures (both heated and cooled effluent) should not exceed the thermal tolerance of the plant and animal species in the receiving body of water.
4. Mitigation should be provided for the loss of EFH from placement of the intake structure and delivery pipeline.

o Aquaculture Facilities

Impacts:

- Discharge of organic waste from the farms
- Impacts to the seafloor below the cages or pens

Conservation Measures:

1. Facilities should be located in upland areas as often as possible. Tidally influenced wetlands should not be enclosed or impounded for mariculture purposes. This includes hatchery and grow-out operations. Siting of facilities should also take into account the size of the facility, the presence or absence of submerged aquatic vegetation and coral reef ecosystems, proximity of wild fish stocks, migratory patterns, competing uses, hydrographic conditions, and upstream uses. Benthic productivity should be determined by sampling prior to any operations. Areas of high productivity should be avoided to the maximum extent possible. Sampling design should be developed with input from state and federal resource agencies.
2. To the extent practicable, water intakes should be designed to avoid entrainment and impingement of native fauna.
3. Water discharge should be treated to avoid contamination of the receiving water and should be located only in areas having good mixing characteristics.
4. Where cage mariculture operations are undertaken, water depths and circulation patterns should be investigated and should be adequate to preclude the buildup of waste products, excess feed, and chemical agents.
5. Non-native, ecologically undesirable species that are reared may pose a risk of escape or accidental release, which could adversely affect the ecological balance of an area. A thorough scientific review and risk assessment should be undertaken before any non-native species are allowed to be introduced.
6. Any net pen structure should have small enough webbing to prevent entanglement by prey species.
7. Mitigation should be provided for the EFH areas impacted by the facility.

o Introduction of Exotic Species

Impacts:

- Habitat alteration
- Trophic alteration

- Gene pool alteration
- Spatial alteration
- Introduction of disease

Conservation Measures:

1. Vessels should discharge ballast water far enough out to sea to prevent introduction of nonnative species to bays and estuaries.
2. Vessels should conduct routine inspections for presence of exotic species in crew quarters and hull of the vessel prior to embarking to remote islands (PRIAs, NWHI, and northern islands of the CNMI).
3. Exotic species should not be introduced for aquaculture purposes unless a thorough scientific evaluation and risk assessment are performed (see section on aquaculture).
4. Effluent from public aquaria display laboratories and educational institutes using exotic species should be treated prior to discharge.

5. Essential Fish Habitat Research Needs

The Council conducted an initial inventory of available environmental and fisheries data sources relevant to the EFH of each managed fishery. Based on this inventory, a series of tables were created that indicated the existing level of data for individual MUS in each fishery. These tables are available in Supplements to Amendment 4, 6, and 10 to the Precious Corals, Bottomfish and Seamount Groundfish, and Crustaceans FMPs respectively (WPRFMC 2002), and the Coral Reef Ecosystems FMP (WPRFMC 2001) and are summarized below.

Additional research is needed to make available sufficient information to support a higher level of description and identification of EFH and HAPC. Additional research may also be necessary to identify and evaluate actual and potential adverse effects on EFH, including, but not limited to, direct physical alteration; impaired habitat quality/functions; cumulative impacts from fishing; or indirect adverse effects, such as sea level rise, climate change, and climate shifts. The following scientific data are needed to more effectively address EFH provisions:

All Species

- Distribution of early life history stages (eggs and larvae) of MUS by habitat
- Juvenile habitat (including physical, chemical, and biological features that determine suitable juvenile habitat)
- Food habits (feeding depth, major prey species, etc.)
- Habitat-related densities for all MUS life history stages
- Habitat utilization patterns for different life history stages and species for BMUS
- Growth, reproduction, and survival rates for MUS within habitats

Bottomfish Species

- Inventory of marine habitats in the EEZ of the Western Pacific Region
- Data to obtain a better SPR estimate for American Samoa's bottomfish complex
- Baseline (virgin stock) parameters (CPUE, percent immature) for the Guam/NMI deep- and shallow-water bottomfish complexes
- High-resolution maps of bottom topography/currents/water masses/primary productivity

Crustaceans Species

- Identification of postlarval settlement habitat of all CMUS
- Identification of source–sink relationships in the NWHI and other regions (i.e., relationships between spawning sites settlement using circulation models, and genetic techniques)
- Establish baseline parameters (CPUE) for the Guam/Northern Marinas crustacean populations
- Research to determine habitat related densities for all CMUS life history stages in American Samoa, Guam, Hawaii, and NMI
- High-resolution mapping of bottom topography, bathymetry, currents, substrate types, algal beds, and habitat relief

Precious Corals Species

- Distribution, abundance, and status of precious corals in the Western Pacific Region

Coral Reef Ecosystem Species

- The distribution of early life history stages (eggs and larvae) of MUS by habitat
- Description of juvenile habitat (including physical, chemical, and biological features that determine suitable juvenile habitat)
- Food habits (feeding depth, major prey species, etc.)
- Habitat-related densities for all MUS life history stages
- Habitat utilization patterns for different life history stages and species
- Growth, reproduction, and survival rates for MUS within habitats.
- Inventory of coral reef ecosystem habitats in the EEZ of the Western Pacific Region
- Location of important spawning sites
- Identification of postlarval settlement habitat
- Establishment of baseline parameters for coral reef ecosystem resources
- High-resolution mapping of bottom topography, bathymetry, currents, substrate types, algal beds, and habitat relief

NMFS guidelines suggest that the Council and NMFS periodically review and update the EFH components of FMPs as new data become available. The Council recommends that new information be reviewed, as necessary, during preparation of the annual and SAFE reports by the Plan Teams, in accordance with the National Standards guidelines. EFH designations may be changed under the FEP amendment process if information presented in an annual review indicates that modifications are justified.

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Appendix G: Essential Fish Habitat and Habitat Areas of Particular Concern Maps

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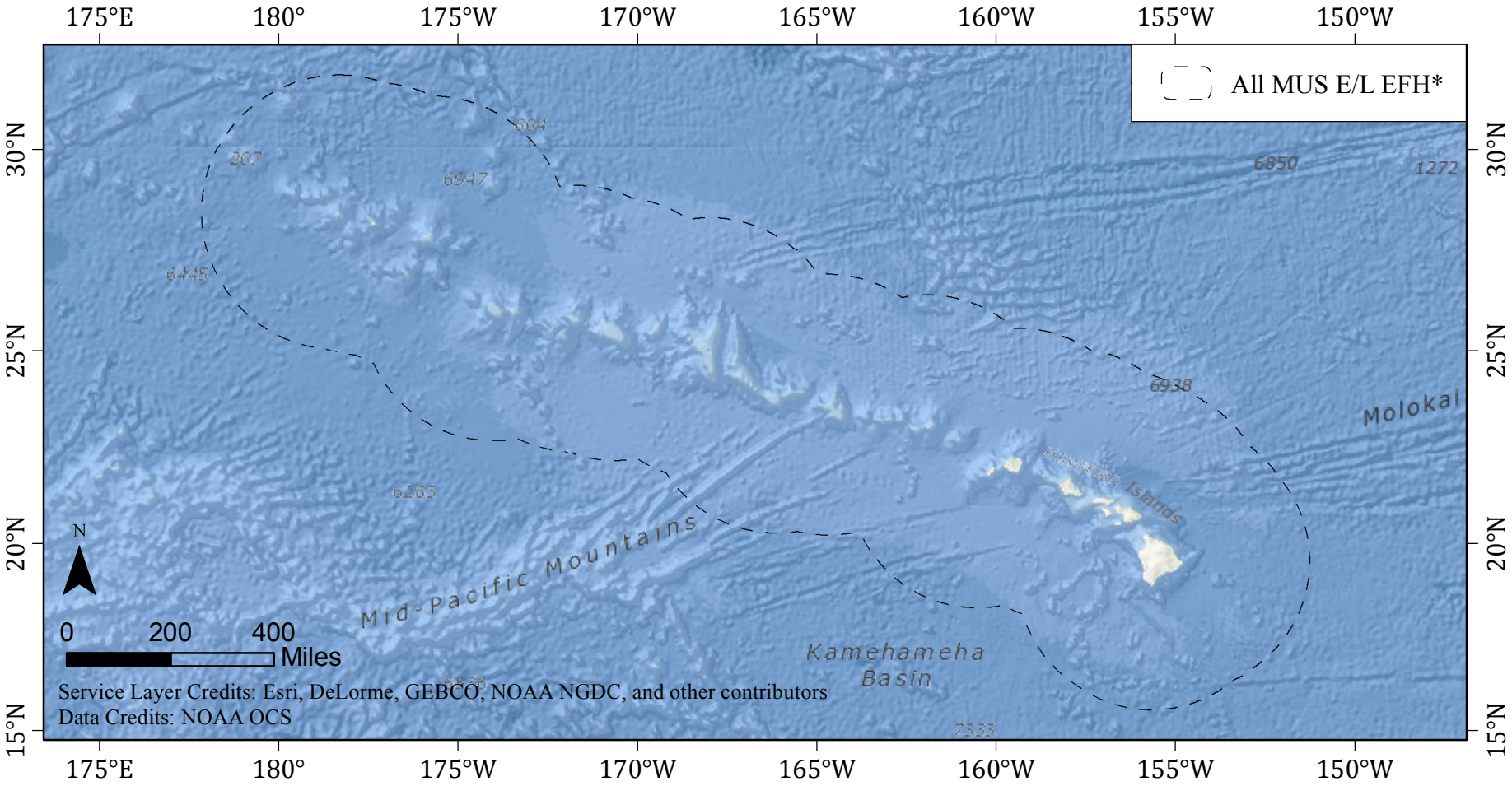
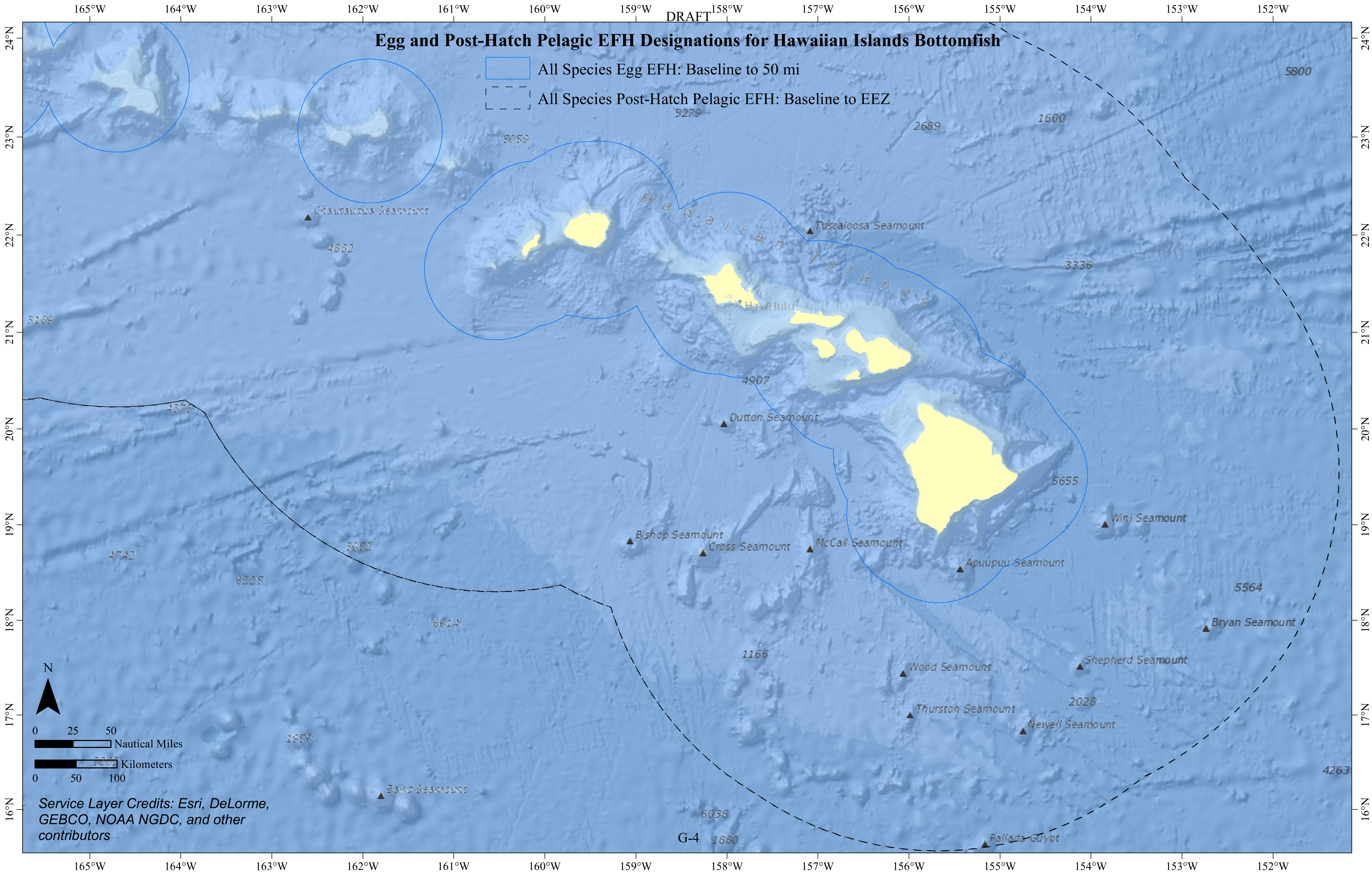
Hawaiian Archipelago Fishery Ecosystem Plan
Egg and Larval EFH, All MUS: Hawaiian Archipelago



**The geographic extent of EFH is shown for the egg and larval (E/L) stages of all management unit species (MUS) except deepwater shrimp from the Crustaceans MUS. Other Crustacean E/L EFH is the water column to a depth of 150 m. Coral Reef E/L EFH is the water column to a depth of 100 m. Bottomfish E/L EFH is the water column to a depth of 400 m.*


Egg and Post-Hatch Pelagic EFH Designations for Hawaiian Islands Bottomfish
All Species Egg EFH: Baseline to 50 mi
All Species Post-Hatch Pelagic EFH: Baseline to EEZ
Hawaiian Islands
Honolulu
Tuscaloosa Seamount
Dutton Seamount
Bishop Seamount
Cross Seamount
McCall Seamount
Apuupuu Seamount
Wini Seamount
Bryan Seamount
Shepherd Seamount
Wood Seamount
Thurston Seamount
Newell Seamount
Pallada Guyot
Baird Seamount
5800
5279
2689
1600
5059
4662
3336
3168
4907
5655
4742
3052
6325
6614
5564
1166
2028
1950
4263
6038
1860
165°W
164°W
163°W
162°W
161°W
160°W
159°W
158°W
157°W
156°W
155°W
154°W
153°W
152°W
24°N
23°N
22°N
21°N
20°N
19°N
18°N
17°N
16°N
N
0 25 50 Nautical Miles
0 50 100 Kilometers
Service Layer Credits: Esri, DeLorme, GEBCO, NOAA NGDC, and other contributors

Post-Settlement, Sub-Adult, and Adult EFH Designations for Hawaiian Islands Bottomfish Shallow Species

Caranx ignobilis EFH: Baseline to 200 m Isobath

Aprion virescens and *Lutjanus kasmira* EFH: Baseline to 240 m isobath

161°W 160°W 159°W 158°W 157°W 156°W 155°W

22°N 21°N 20°N 19°N

Middle Bank

Kauai

Kaua'i Channel

Tuscaloosa Seamount

Oahu

Honolulu

Kaiwi Channel

Hawaiian Islands

Maui

'Alenuihāhā Channel

5284

4907

6046

Dutton Seamount

4977

Indianapolis Seamount

Jaggar Seamount

Hawai'i

Hawaii

Loihi Seamount

Bishop Seamount

McCall Seamount

N

0 25 50 Nautical Miles

0 50 100 Kilometers

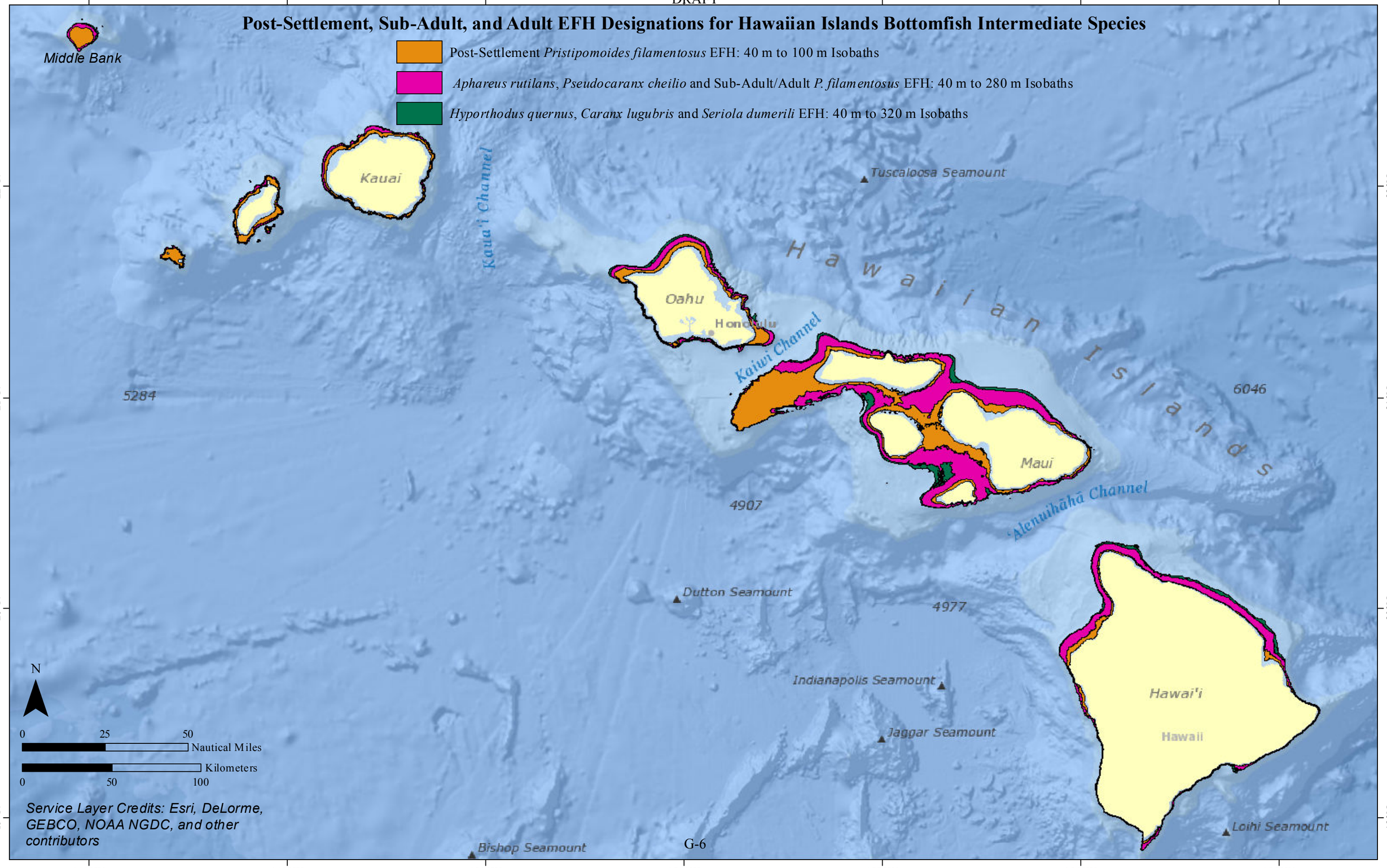
Service Layer Credits: Esri, DeLorme, GEBCO, NOAA NGDC, and other contributors

Post-Settlement, Sub-Adult, and Adult EFH Designations for Hawaiian Islands Bottomfish Intermediate Species

Post-Settlement *Pristipomoides filamentosus* EFH: 40 m to 100 m Isobaths

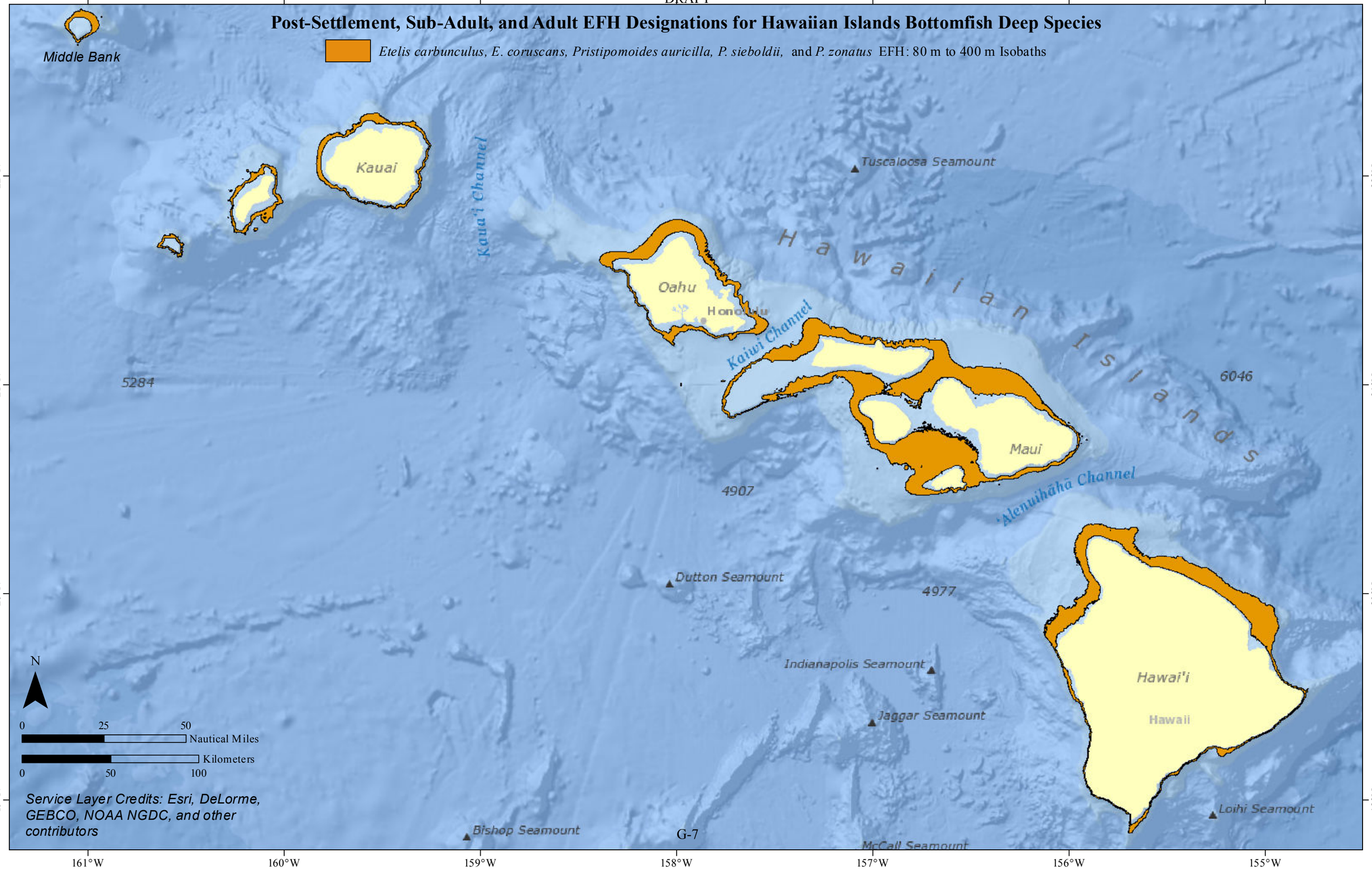
Aphareus rutilans, *Pseudocaranx cheilio* and Sub-Adult/Adult *P. filamentosus* EFH: 40 m to 280 m Isobaths

Hyporthodus quernus, *Caranx lugubris* and *Seriola dumerili* EFH: 40 m to 320 m Isobaths



Post-Settlement, Sub-Adult, and Adult EFH Designations for Hawaiian Islands Bottomfish Deep Species

Etelis carbunculus, E. coruscans, Pristipomoides auricilla, P. sieboldii, and *P. zonatus* EFH: 80 m to 400 m Isobaths



DRAFT

HAPC Designations for Hawaiian Islands Bottomfish

159°W 158°W 157°W 156°W 155°W 154°W

21°N

20°N

19°N

Ka'ena Pt
Kaneohe
Makapu'u Pt
Oahu
Honolulu
Hawaiian Islands
Kaiwi Channel
Penguin Bank
Penguin Bank
Pailolo Channel
Maui
N. Kaho'olawe
Kealaikahiki Channel
'Alenuihāhā Channel
4907
Dutton Seamount
4977
Kawaihae Bay
Hilo
Hawai'i
Hawaii
Powers Seamount
Indianapolis Seamount
Jaggar Seamount
5655
Ellis Seamount
Brigham Seamount
Washington Seamount
Bishop Seamount
Loihi Seamount

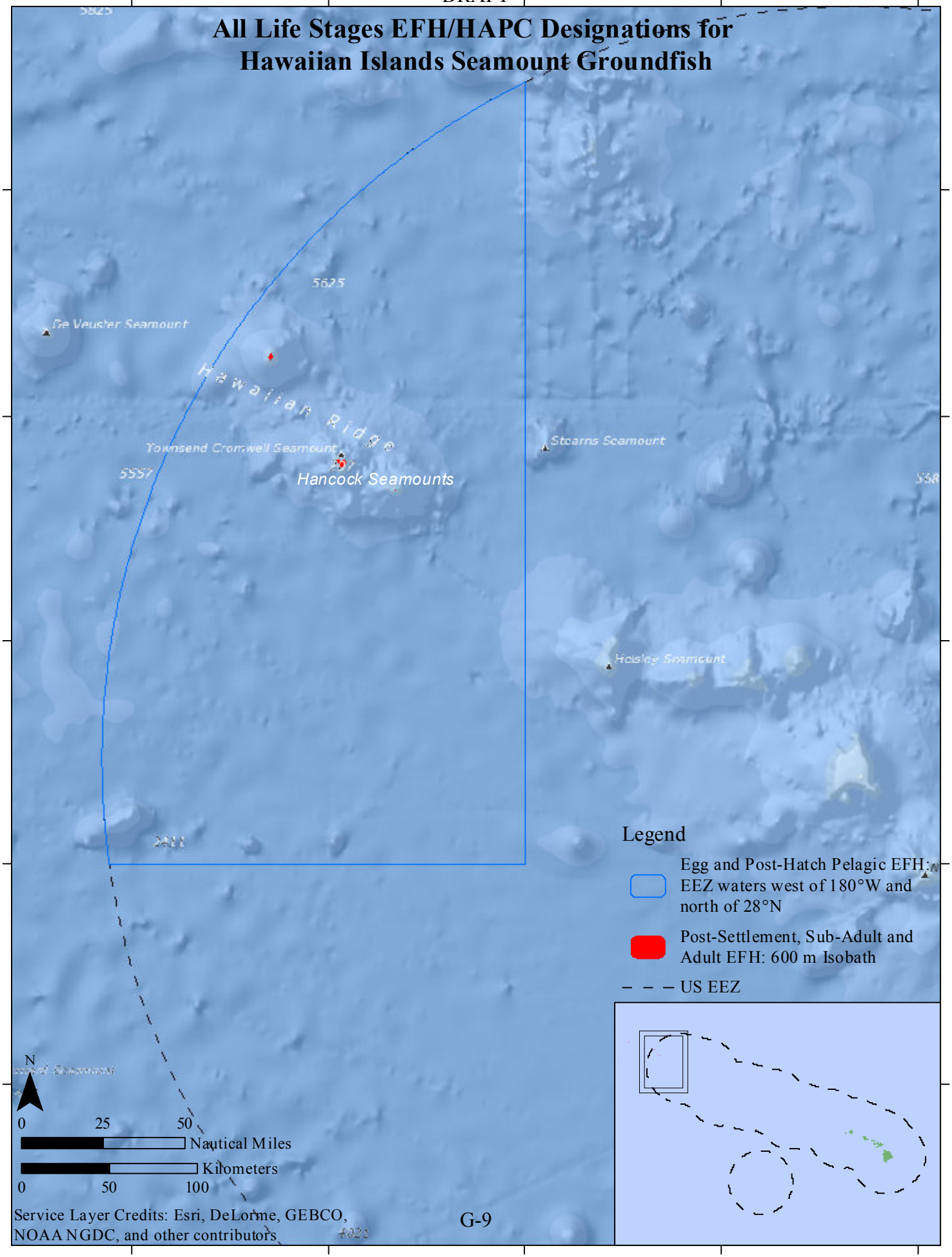
N

0 25 50 Nautical Miles

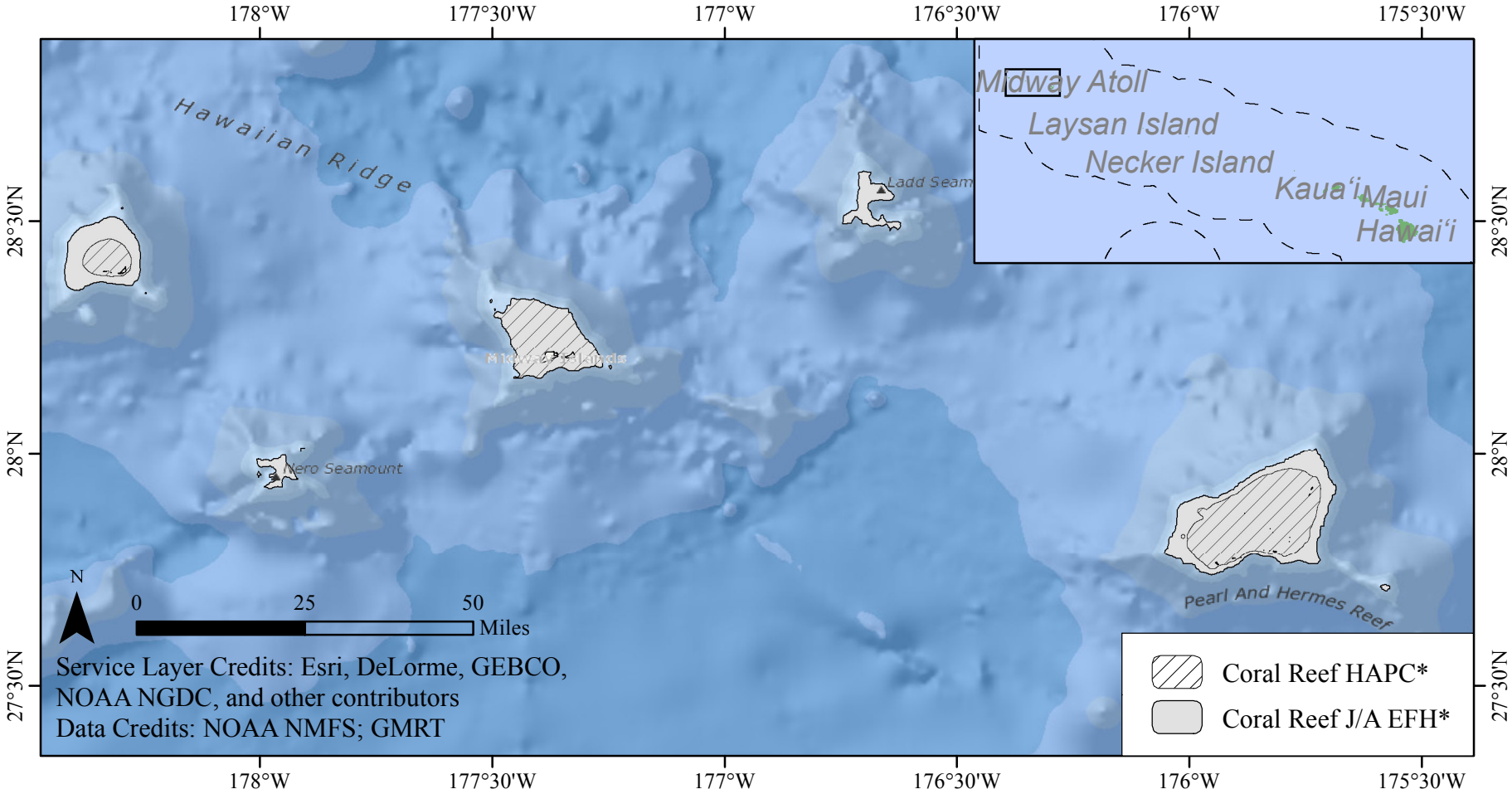
0 50 100 Kilometers

Service Layer Credits: Esri, DeLorme, GEBCO, NOAA NGDC, and other contributors

All Life Stages EFH/HAPC Designations for Hawaiian Islands Seamount Groundfish

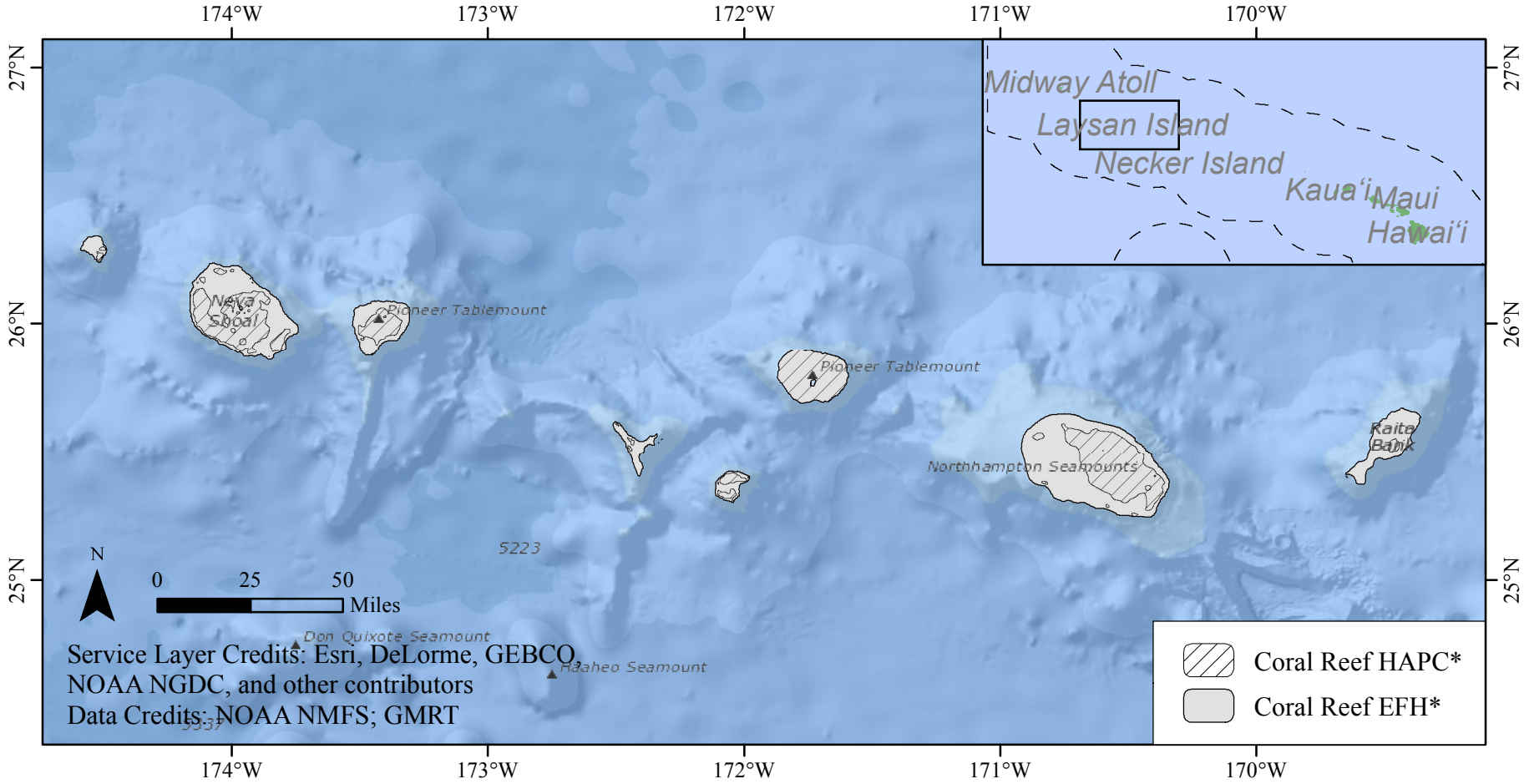


Hawaiian Archipelago Fishery Ecosystem Plan
Coral Reef Essential Fish Habitat: Kure Atoll to Pearl and Hermes Reef



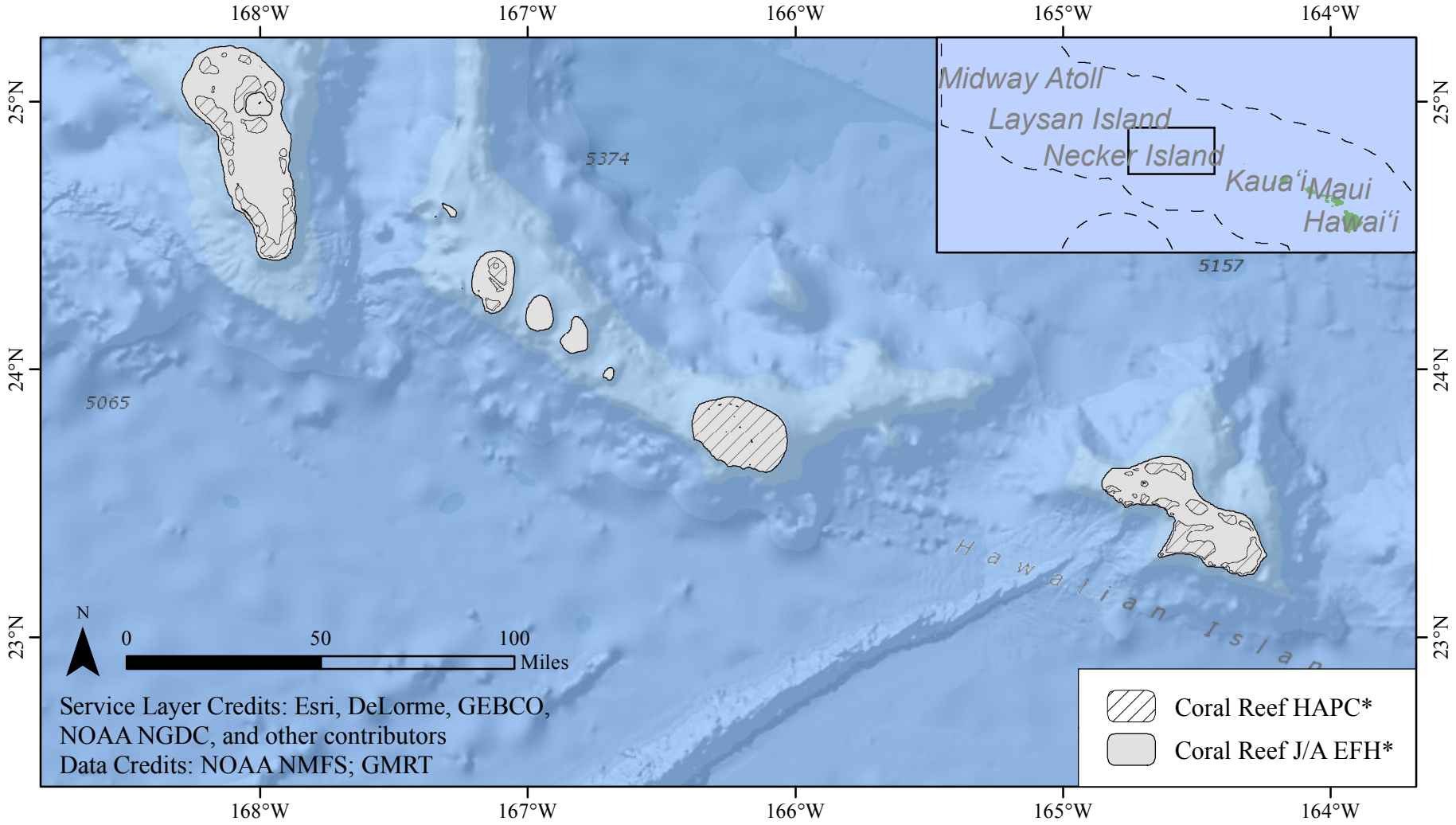
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family. HAPC in the NWHI is al substrate 0-10 fathoms and all substrate at French Frigate Shoals, Midway, and Laysan 0-50 fathoms.*

Hawaiian Archipelago Fishery Ecosystem Plan
Coral Reef Essential Fish Habitat: Lisianski Island to Raita Bank



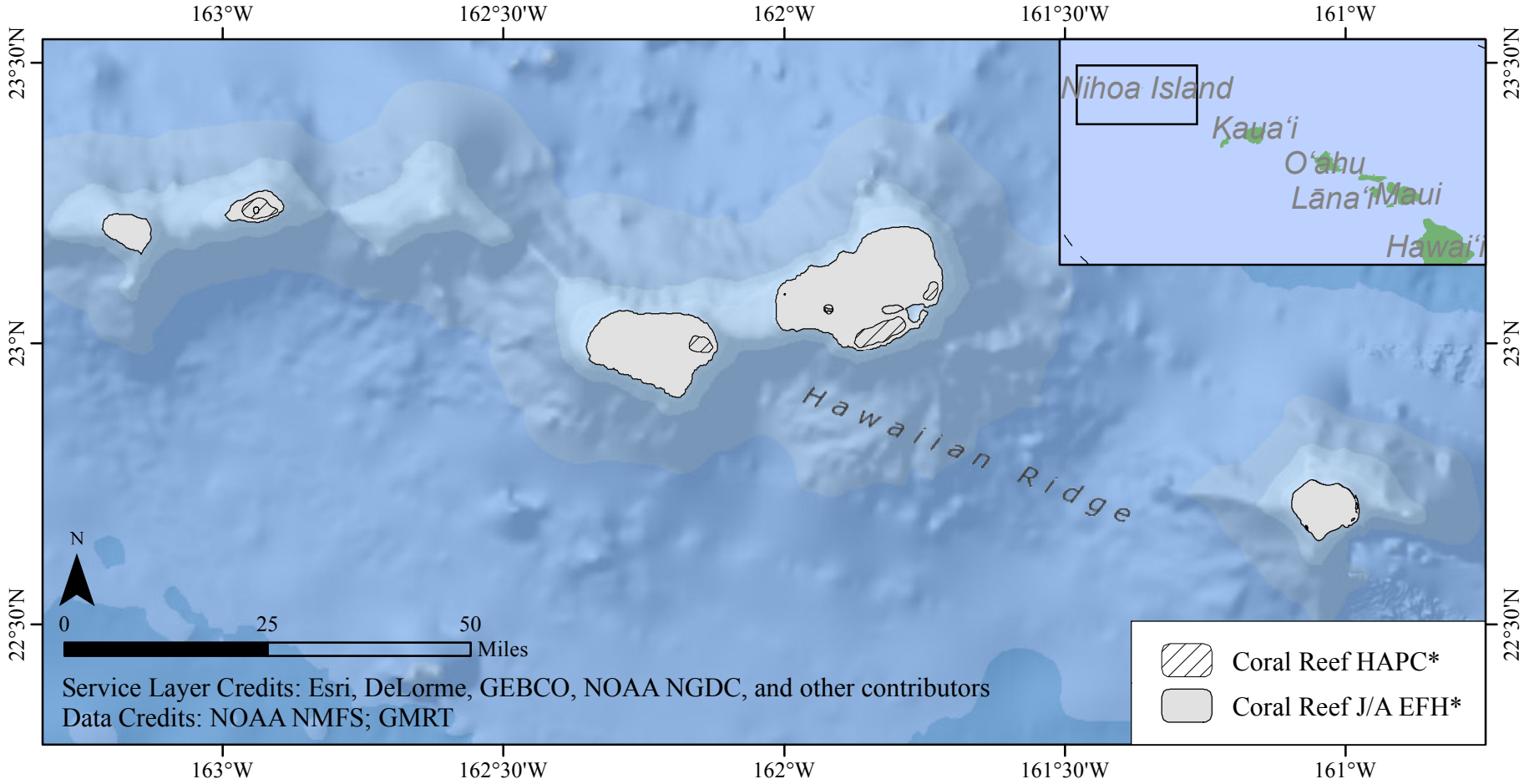
**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family. HAPC in the NWHI is all substrate 0-10 fathoms and all substrate at French Frigate Shoals, Midway, and Laysan 0-50 fathoms.*

Hawaiian Archipelago Fishery Ecosystem Plan
Coral Reef Essential Fish Habitat: Gardner Pinnacles to Necker Island



**The geographic extent of juvenile/adult (J/A) EFH is shown. EFH for eggs and larvae is the water column to a depth of 100 m from the shoreline to the outer boundary of the EEZ, while J/A EFH is all bottom habitat and the adjacent water column to a depth of 100 m to the extent shown. The type of bottom habitat varies by family. HAPC in the NWHI is all substrate 0-10 fathoms and all substrate at French Frigate Shoals, Midway, and Laysan 0-50 fathoms.*

Hawaiian Archipelago Fishery Ecosystem Plan
Coral Reef Essential Fish Habitat: Twin Banks to Middle Bank



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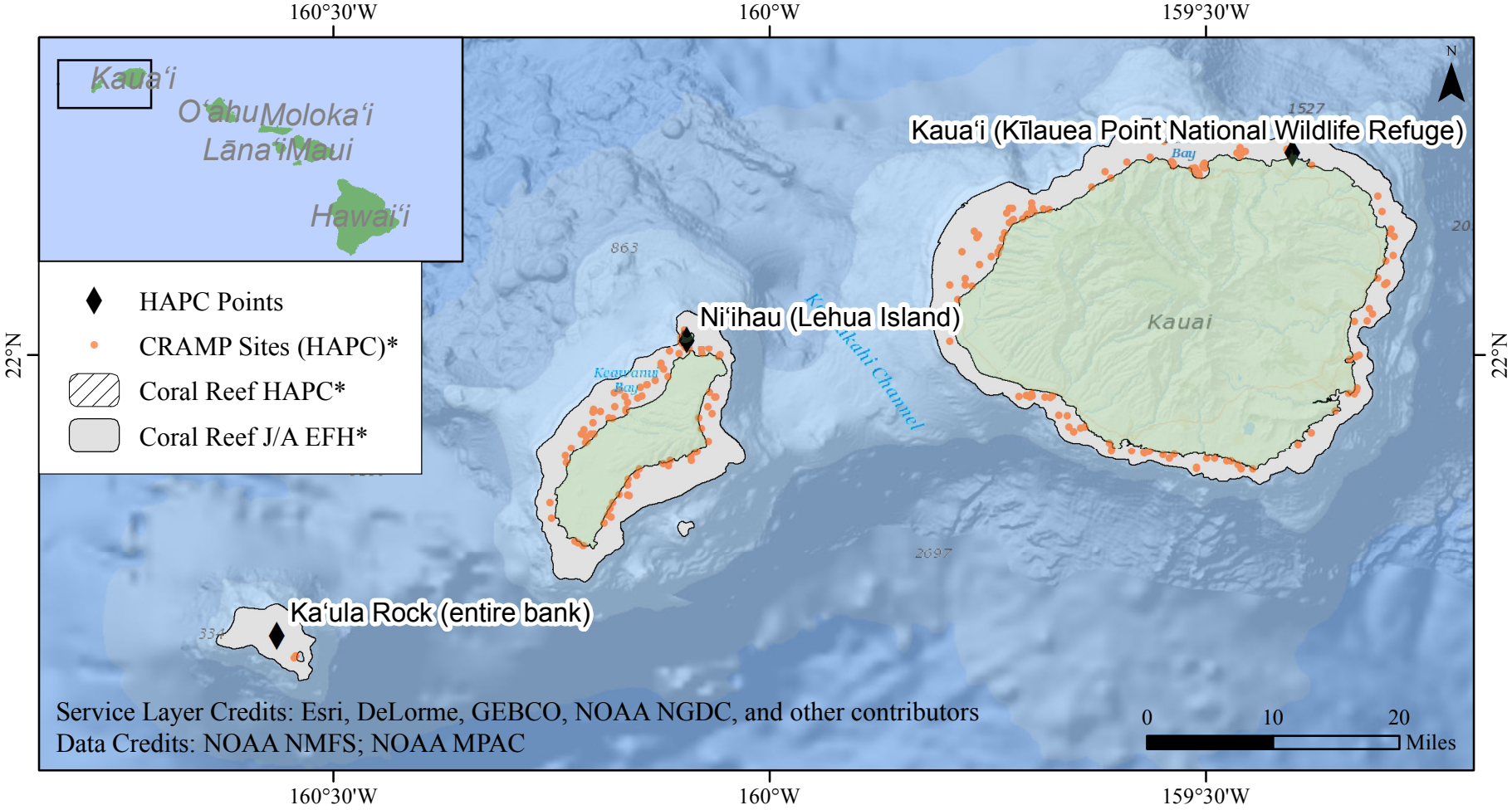
Hawaiian Archipelago Fishery Ecosystem Plan
Coral Reef Essential Fish Habitat: Ka‘ula Rock to Kaua‘i



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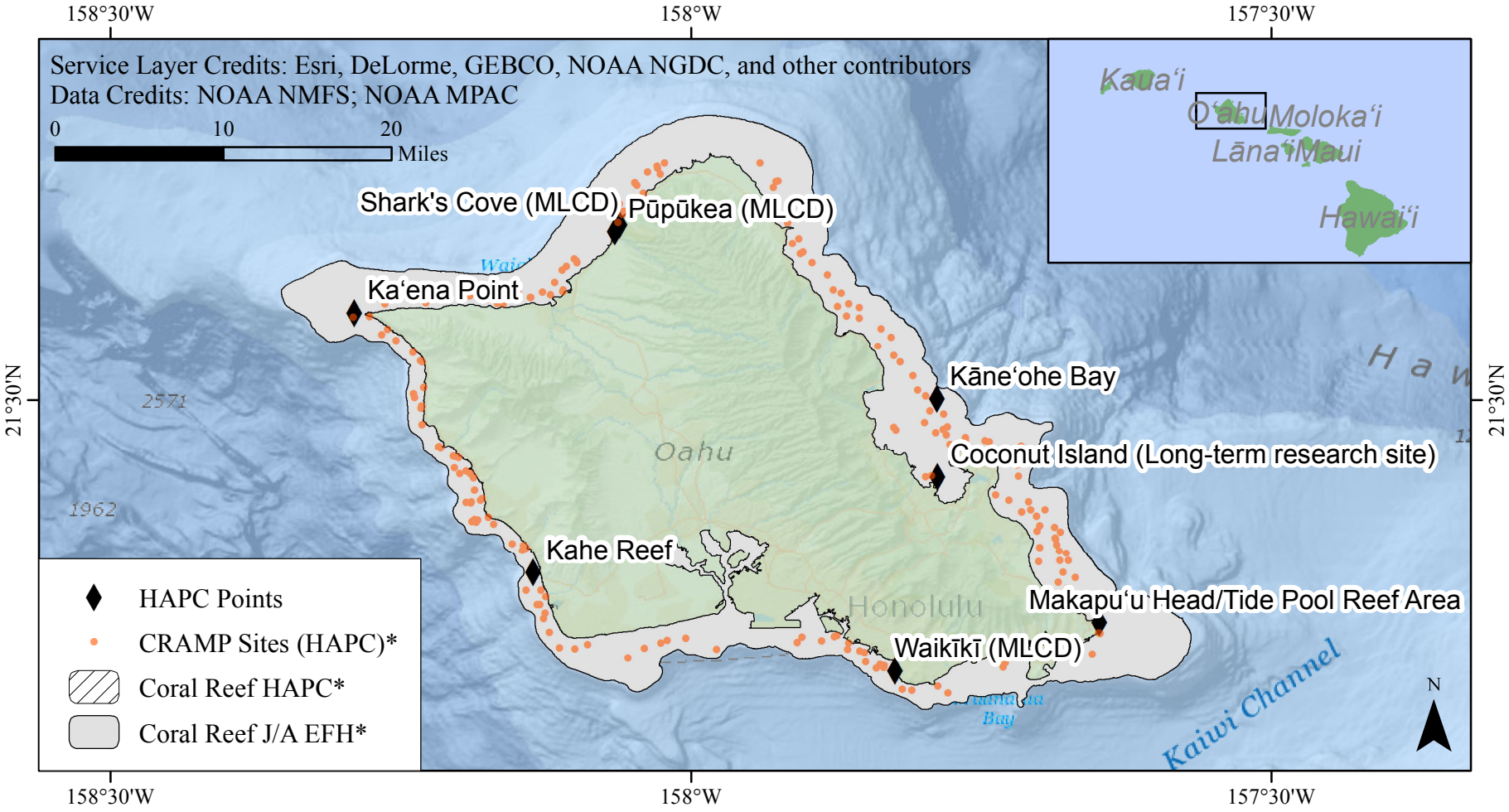
Hawaiian Archipelago Fishery Ecosystem Plan
Coral Reef Essential Fish Habitat: O‘ahu



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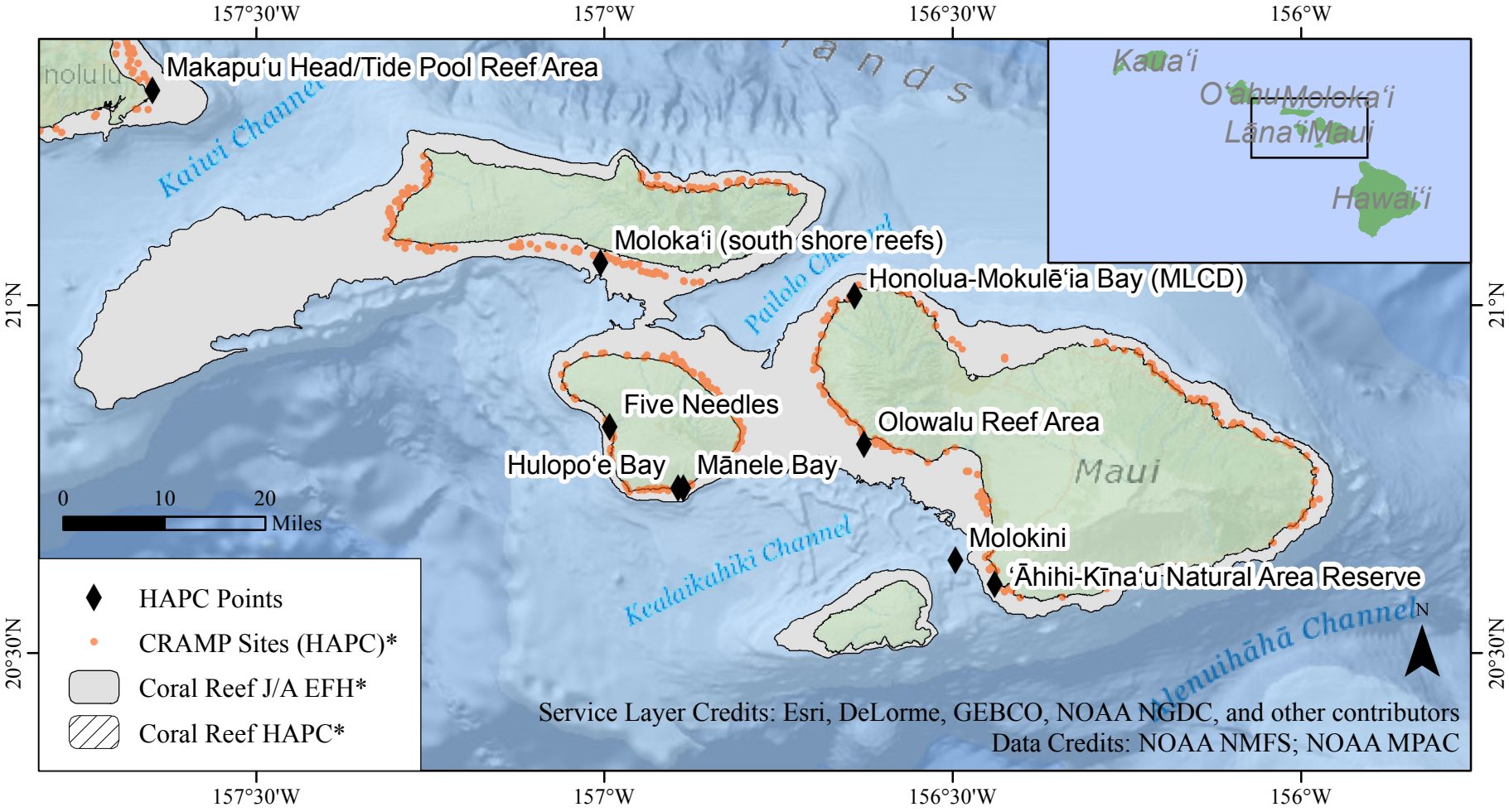
Hawaiian Archipelago Fishery Ecosystem Plan
Coral Reef Essential Fish Habitat: Maui Nui



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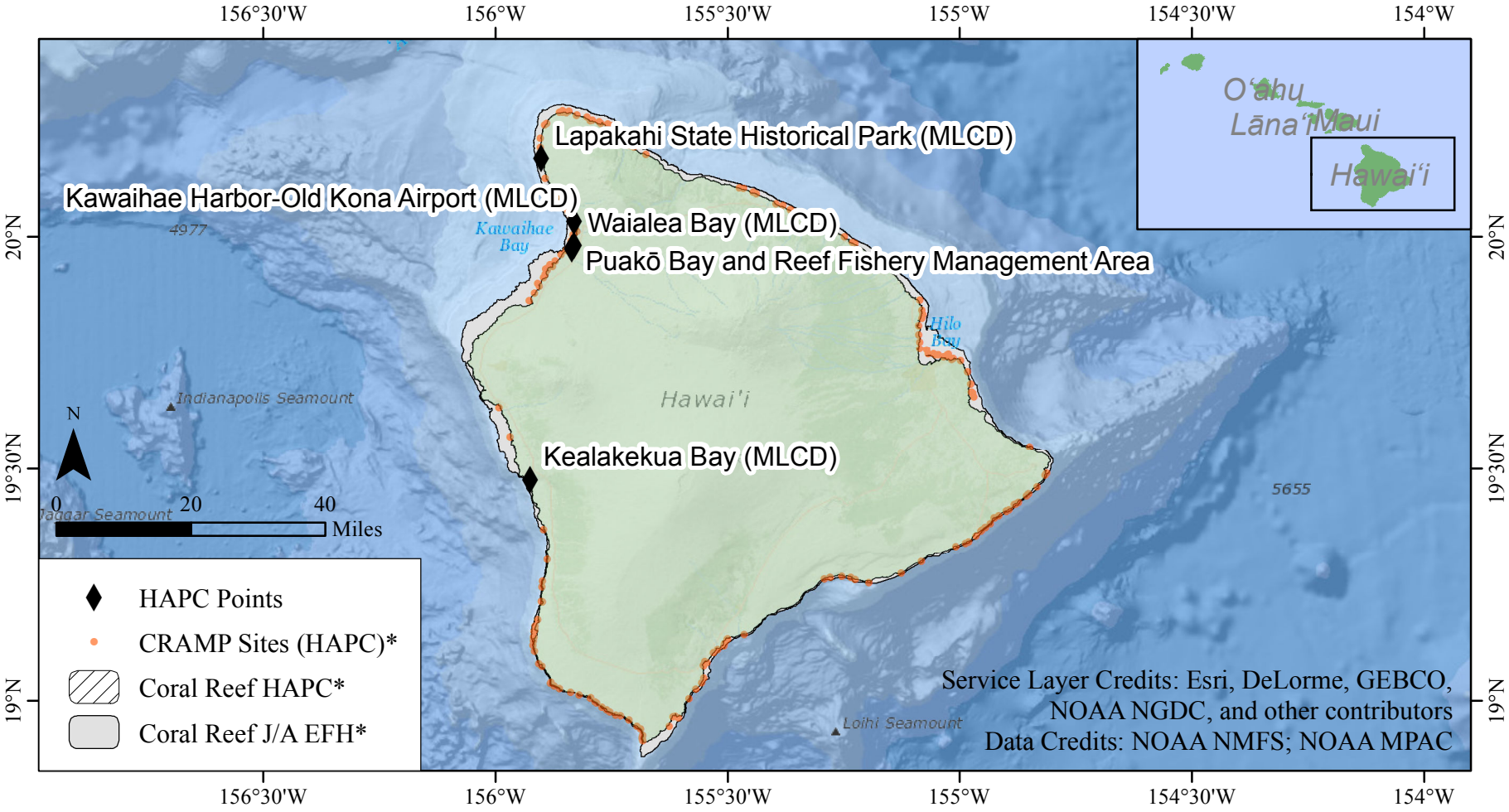
Hawaiian Archipelago Fishery Ecosystem Plan
Coral Reef Essential Fish Habitat: Hawai‘i Island



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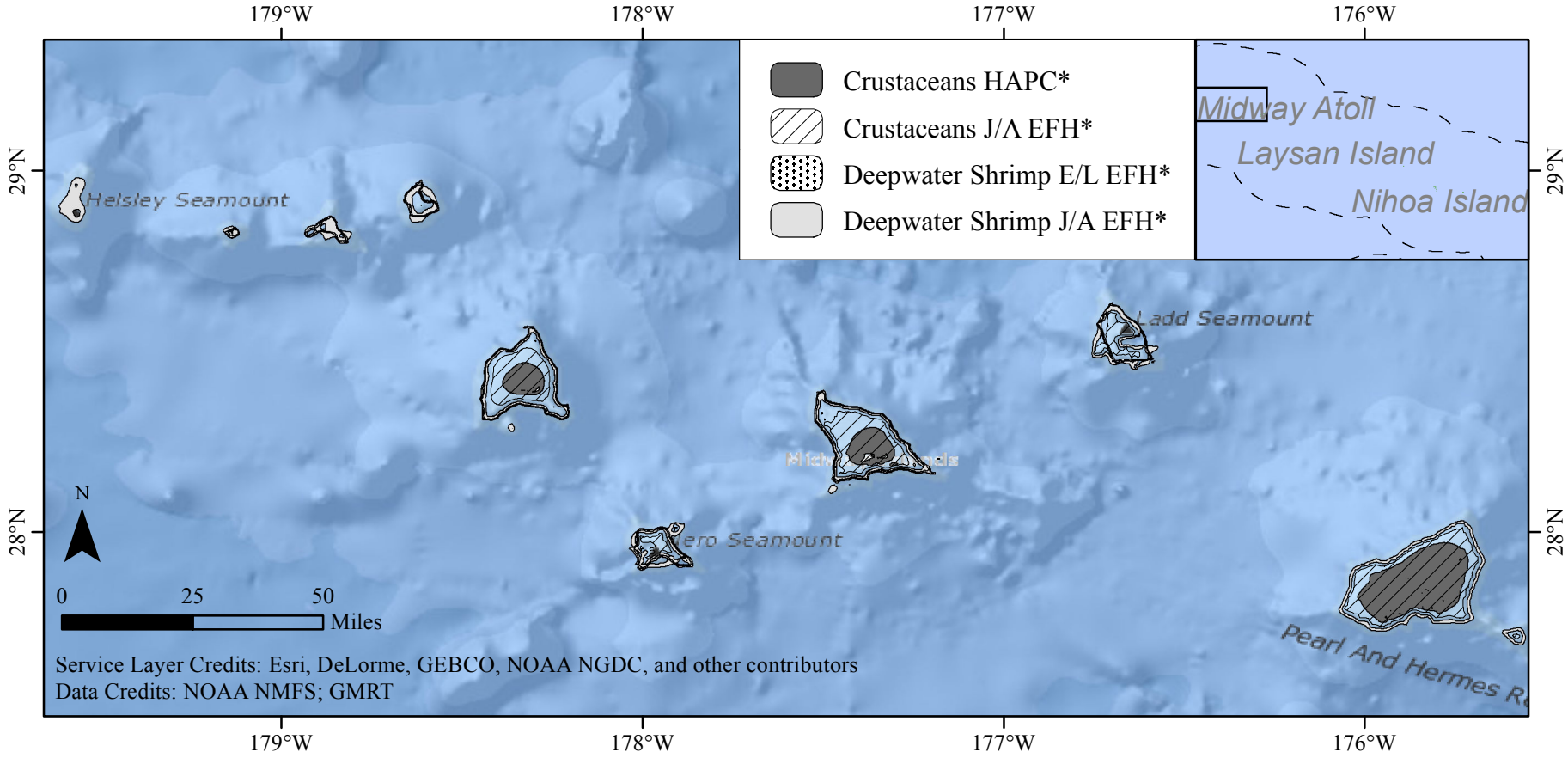
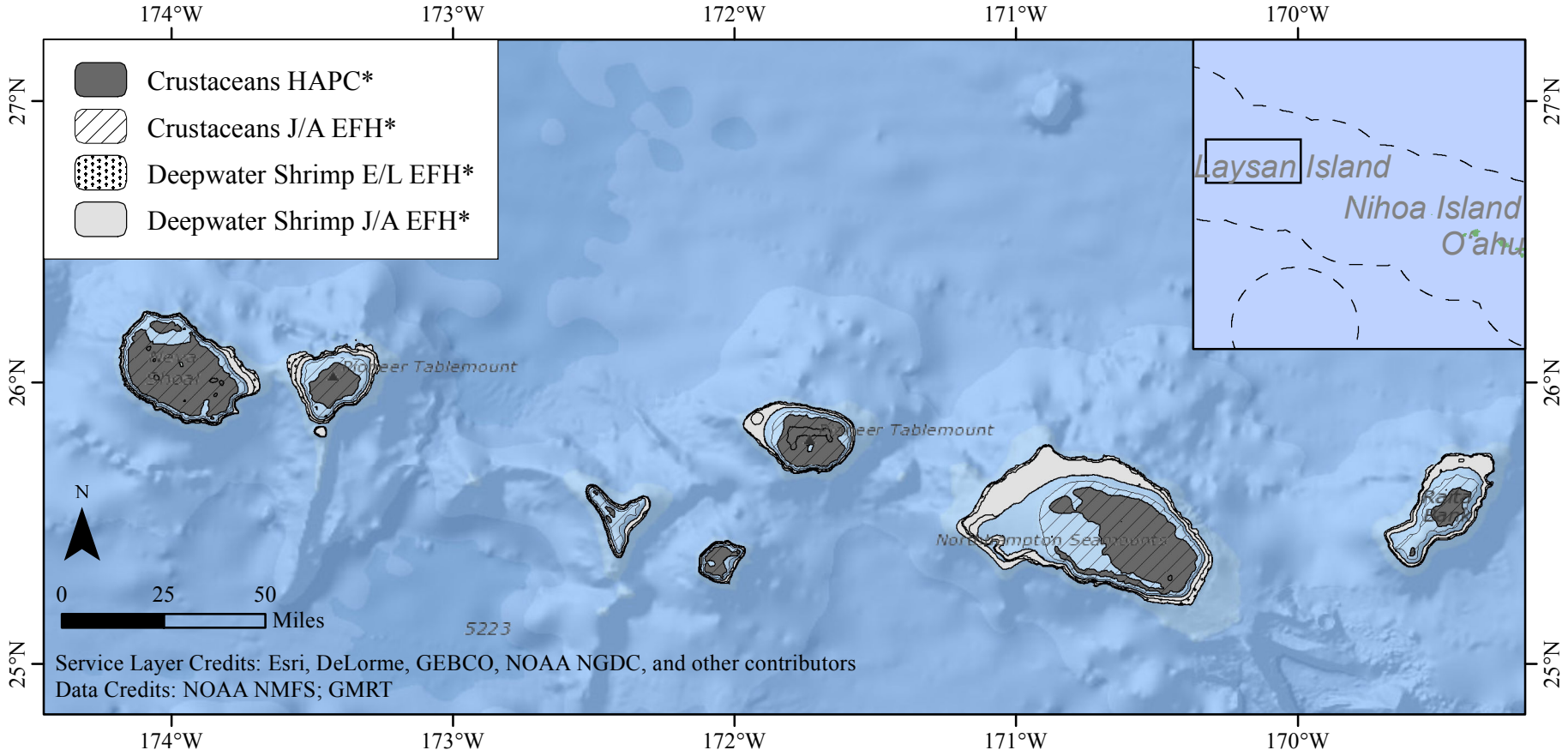
Hawaiian Archipelago Fishery Ecosystem Plan
Crustaceans Essential Fish Habitat: Helsley Seamount to Pearl and Hermes Reef



**The geographic extent of EFH is shown. EFH for crustaceans eggs and larvae (E/L) is the water column to a depth of 150 m from the shoreline to the outer boundary of the EEZ, while juvenile/adult (J/A) EFH is all bottom habitat to a depth of 100 m to the extent shown.. HAPC is all banks in the NWHI with summits shallower than 30 m. Deepwater shrimp E/L EFH is the water column and outer reef slopes between 550 m and 700 m to the extent shown, while deepwater shrimp J/A EFH is the outer reef slopes between 300 and 700 meters to the extent shown.*

Hawaiian Archipelago Fishery Ecosystem Plan
Crustaceans Essential Fish Habitat: Lisianski Island to Raita Bank



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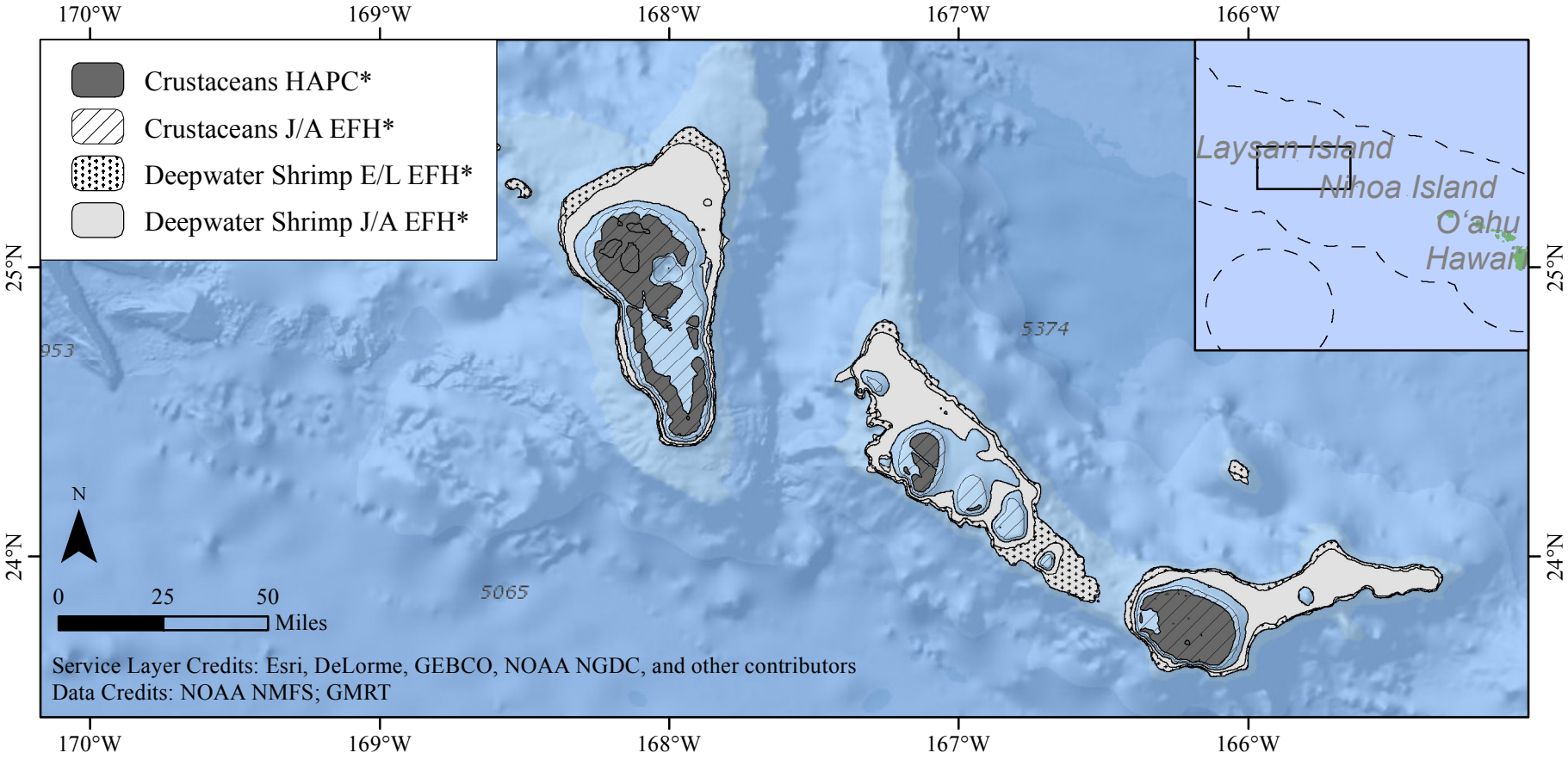
Hawaiian Archipelago Fishery Ecosystem Plan
Crustaceans Essential Fish Habitat: Gardner Pinnacles to French Frigate Shoals



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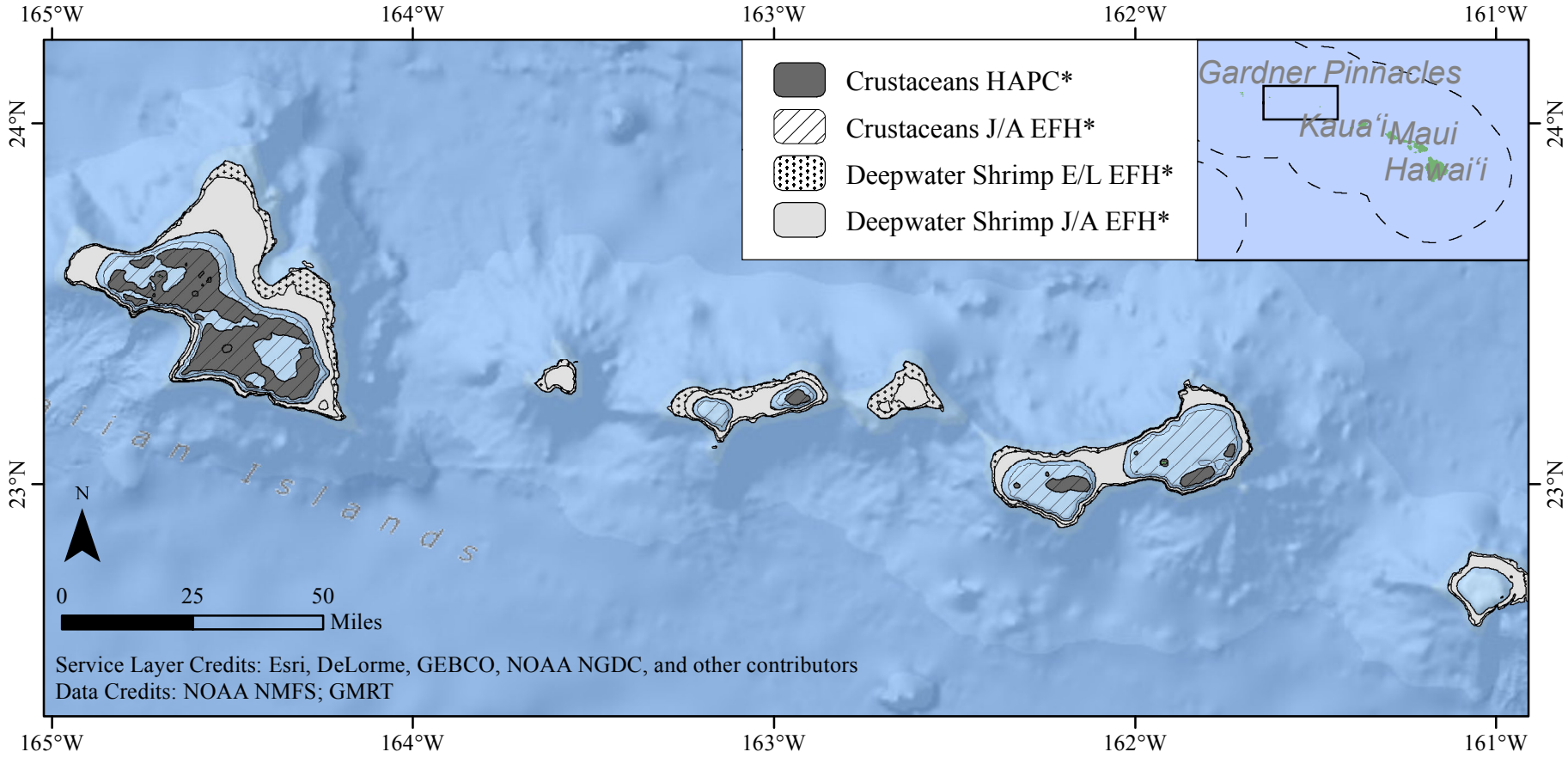
Hawaiian Archipelago Fishery Ecosystem Plan
Crustaceans Essential Fish Habitat: Necker Island to Middle Bank



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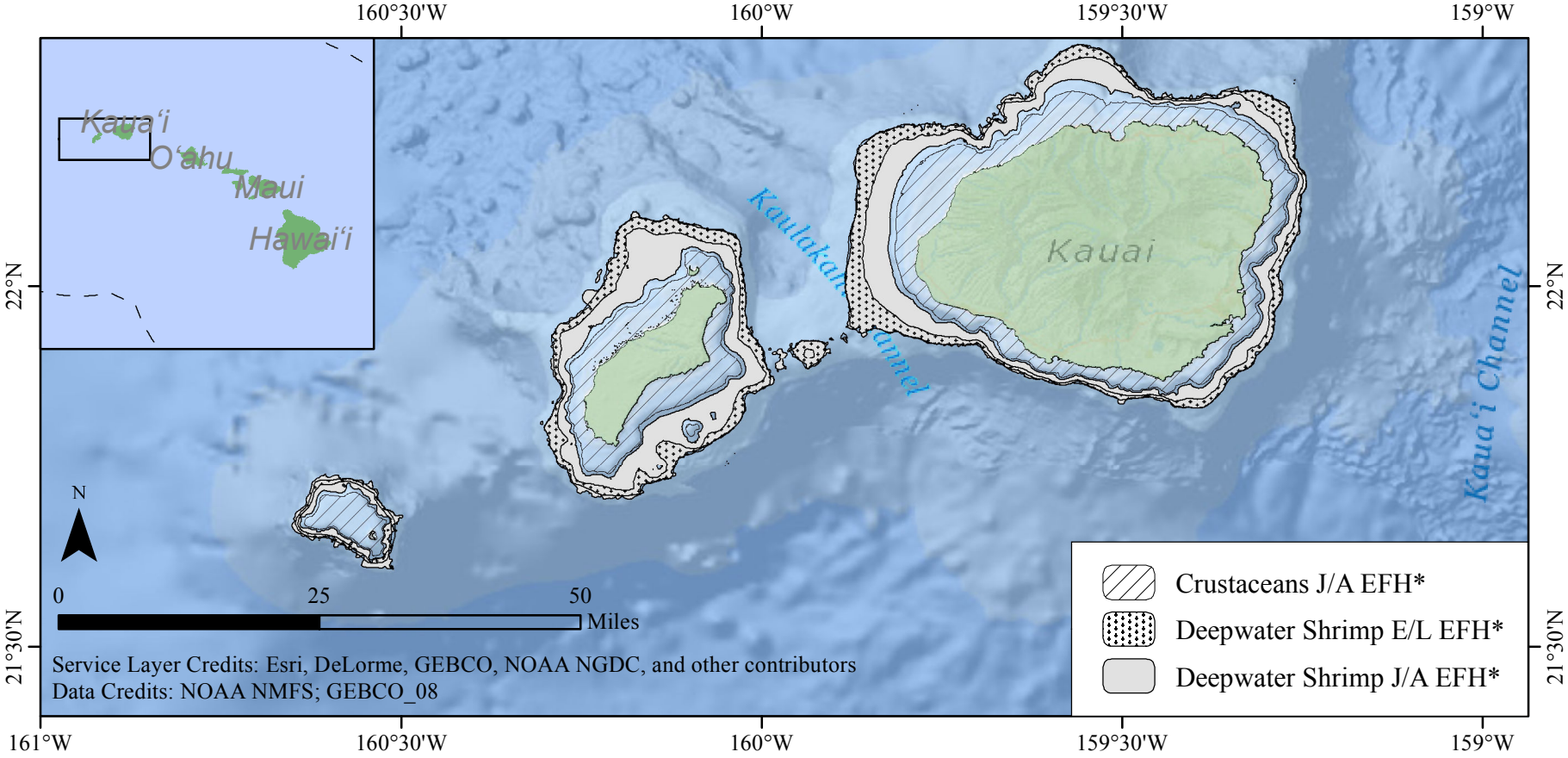
Hawaiian Archipelago Fishery Ecosystem Plan
Crustaceans Essential Fish Habitat: Ka‘ula Rock to Kaua‘i



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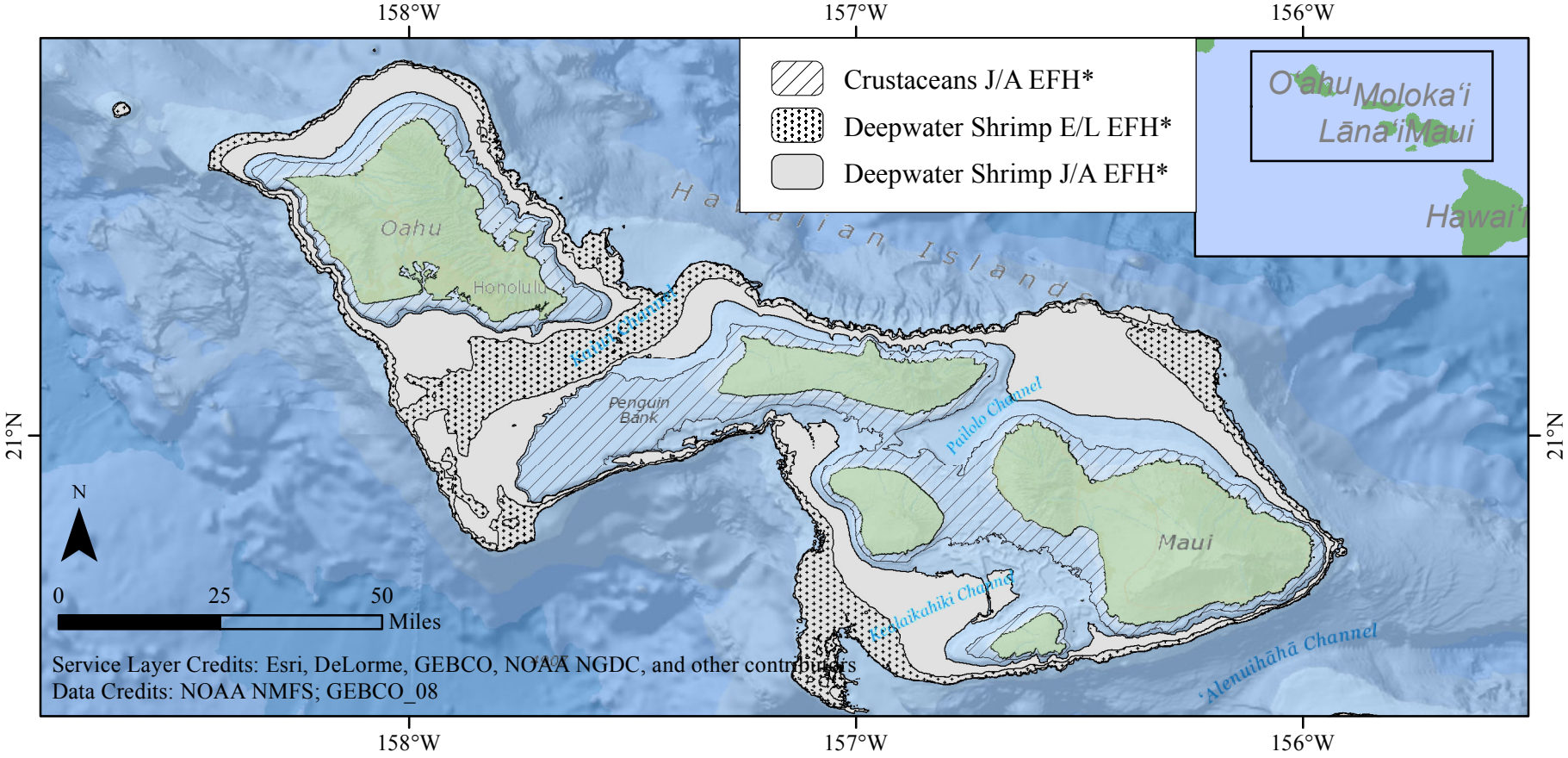
Hawaiian Archipelago Fishery Ecosystem Plan
Crustaceans Essential Fish Habitat: O‘ahu to Maui Nui



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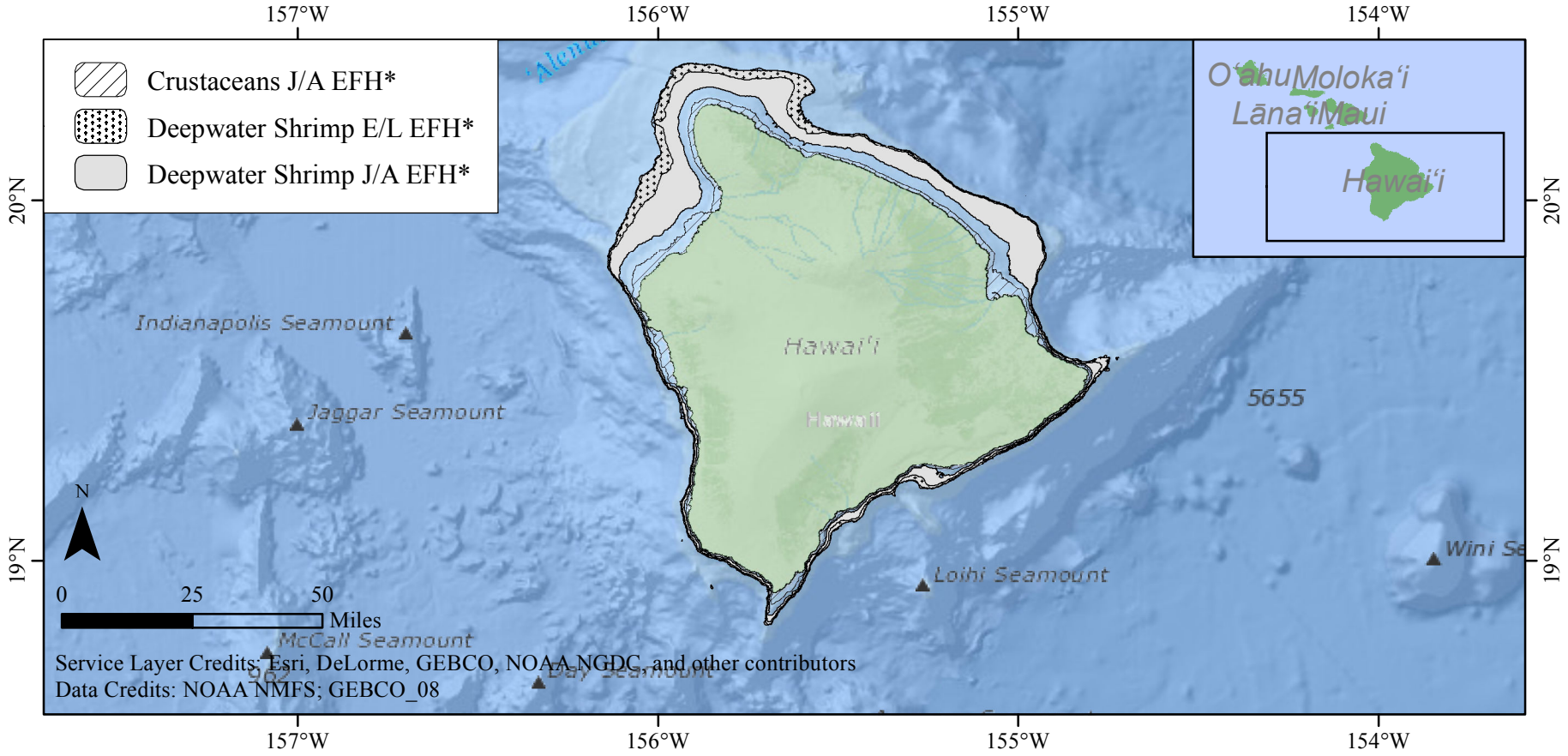
Hawaiian Archipelago Fishery Ecosystem Plan
Crustaceans Essential Fish Habitat: Hawai‘i Island



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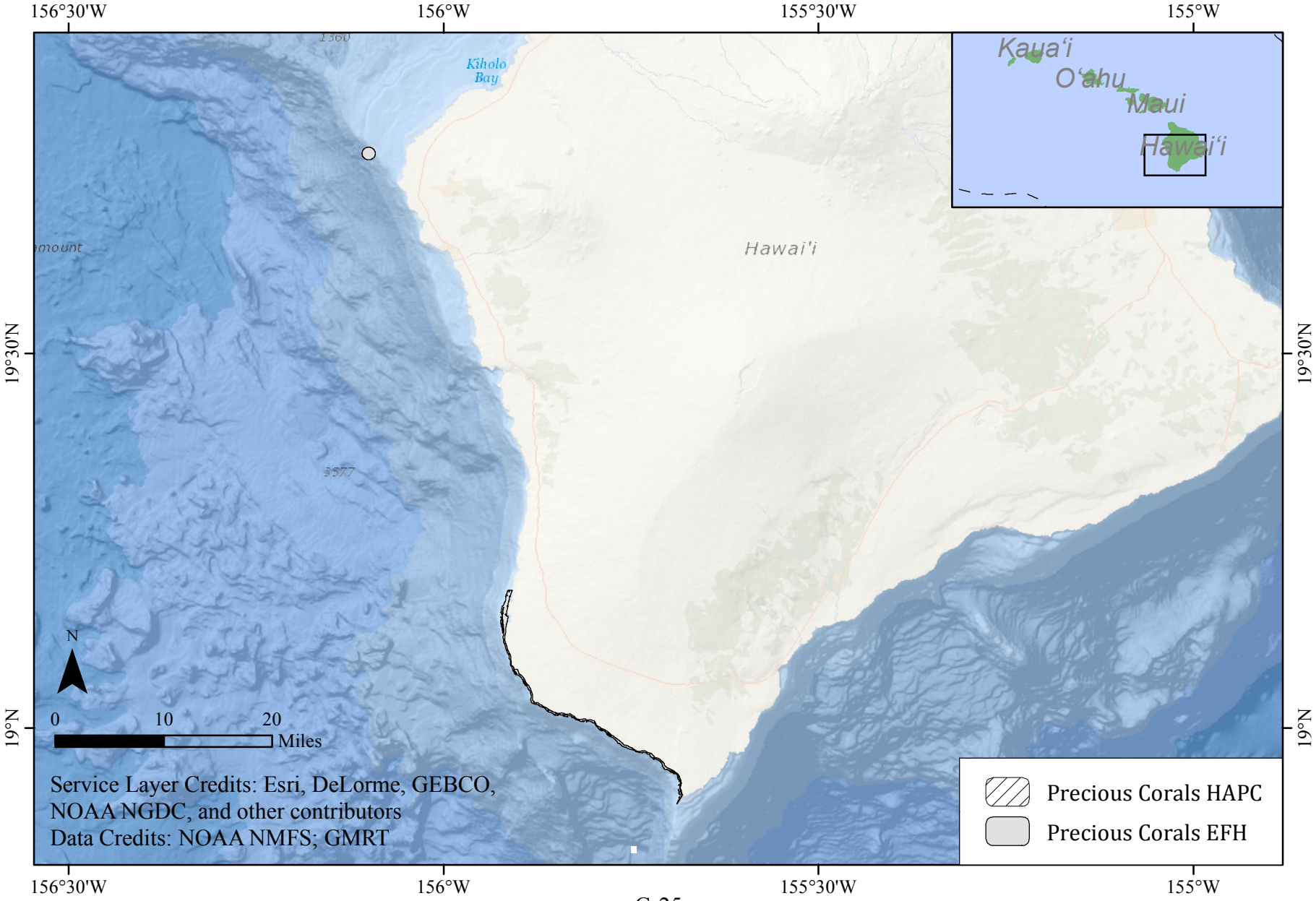
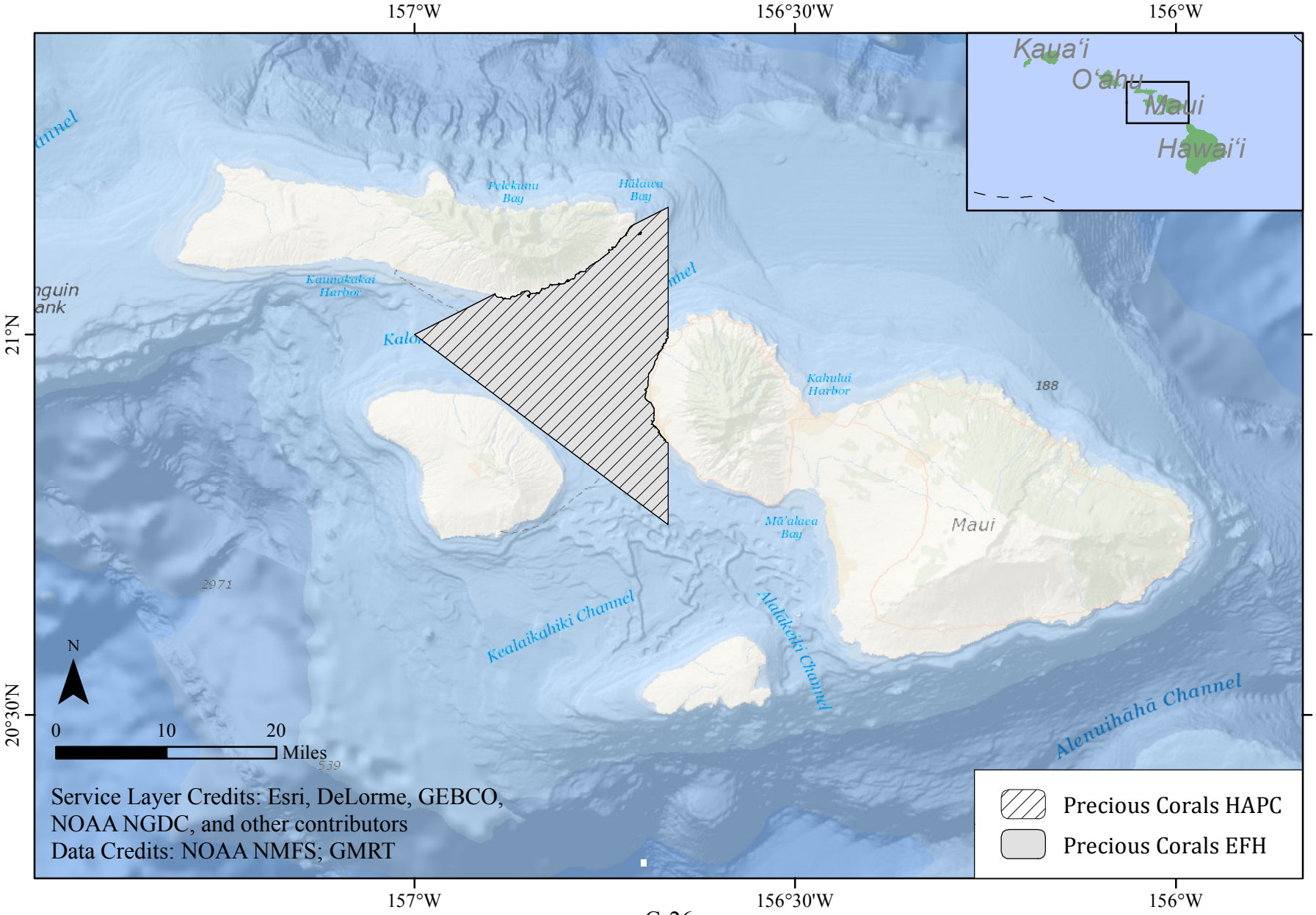
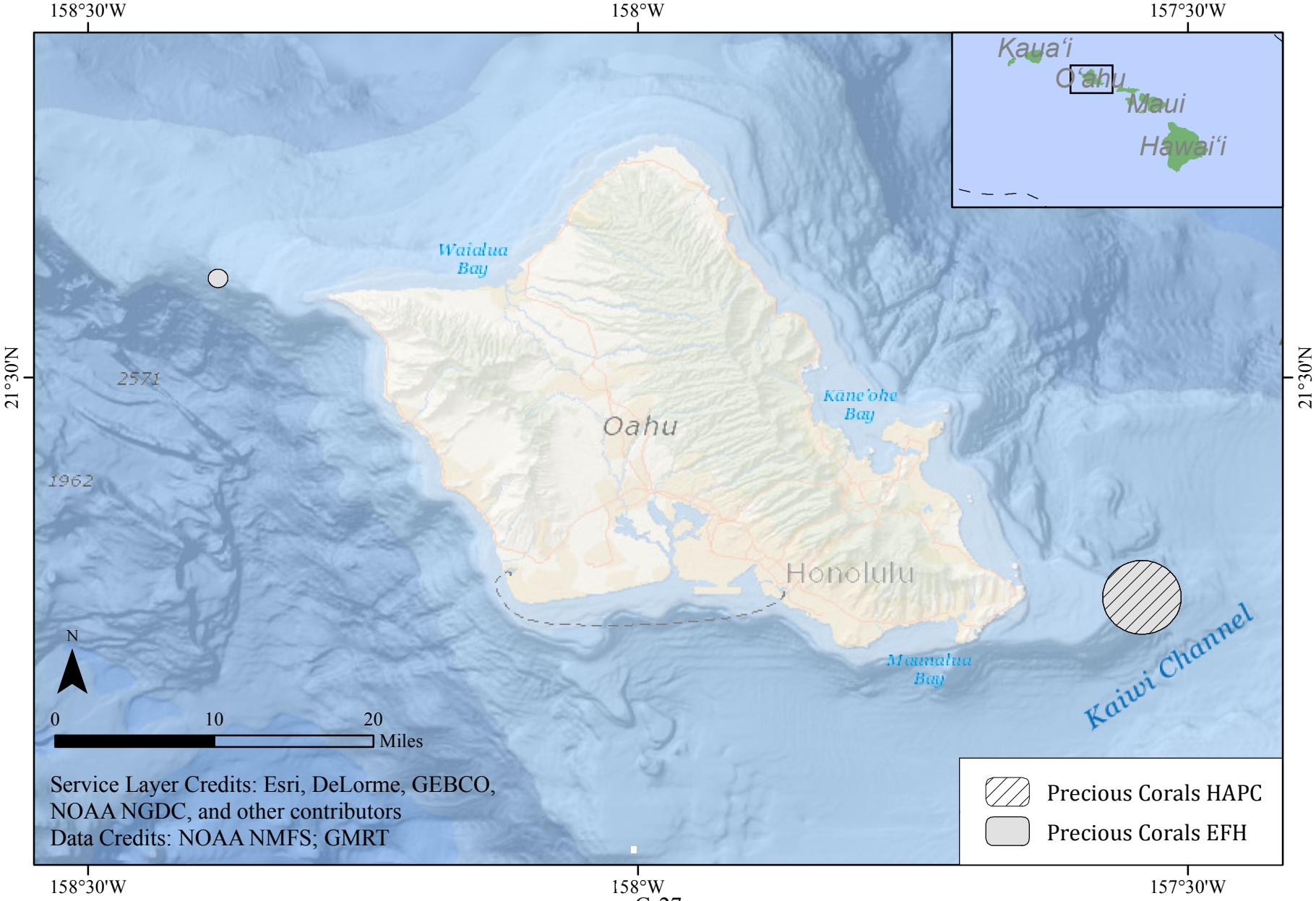
Hawaiian Archipelago Fishery Ecosystem Plan
Precious Corals Essential Fish Habitat: West Hawaii Island



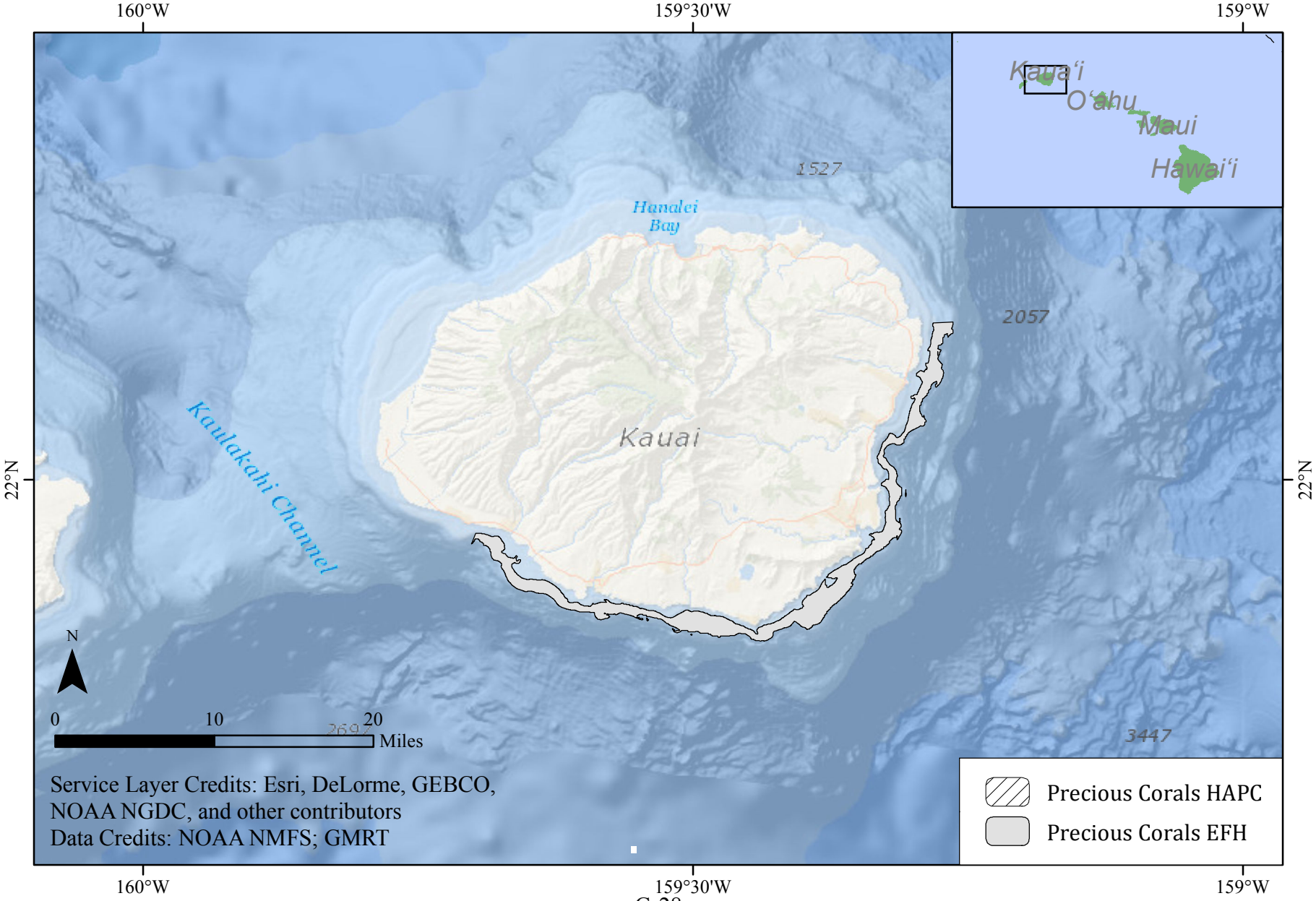
Hawaiian Archipelago Fishery Ecosystem Plan
Precious Corals Essential Fish Habitat: Auau Channel



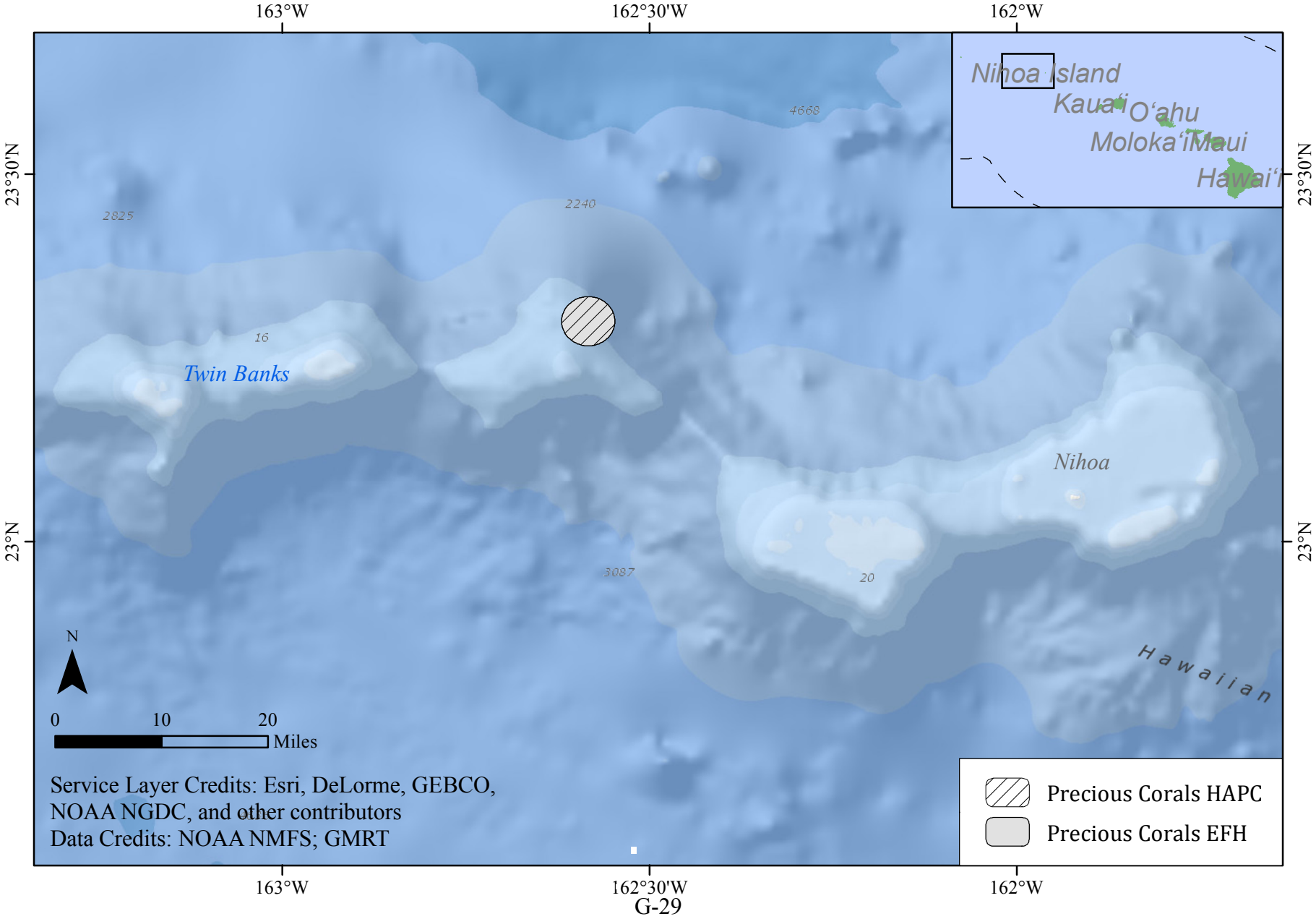
Hawaiian Archipelago Fishery Ecosystem Plan
Precious Corals Essential Fish Habitat: Oahu



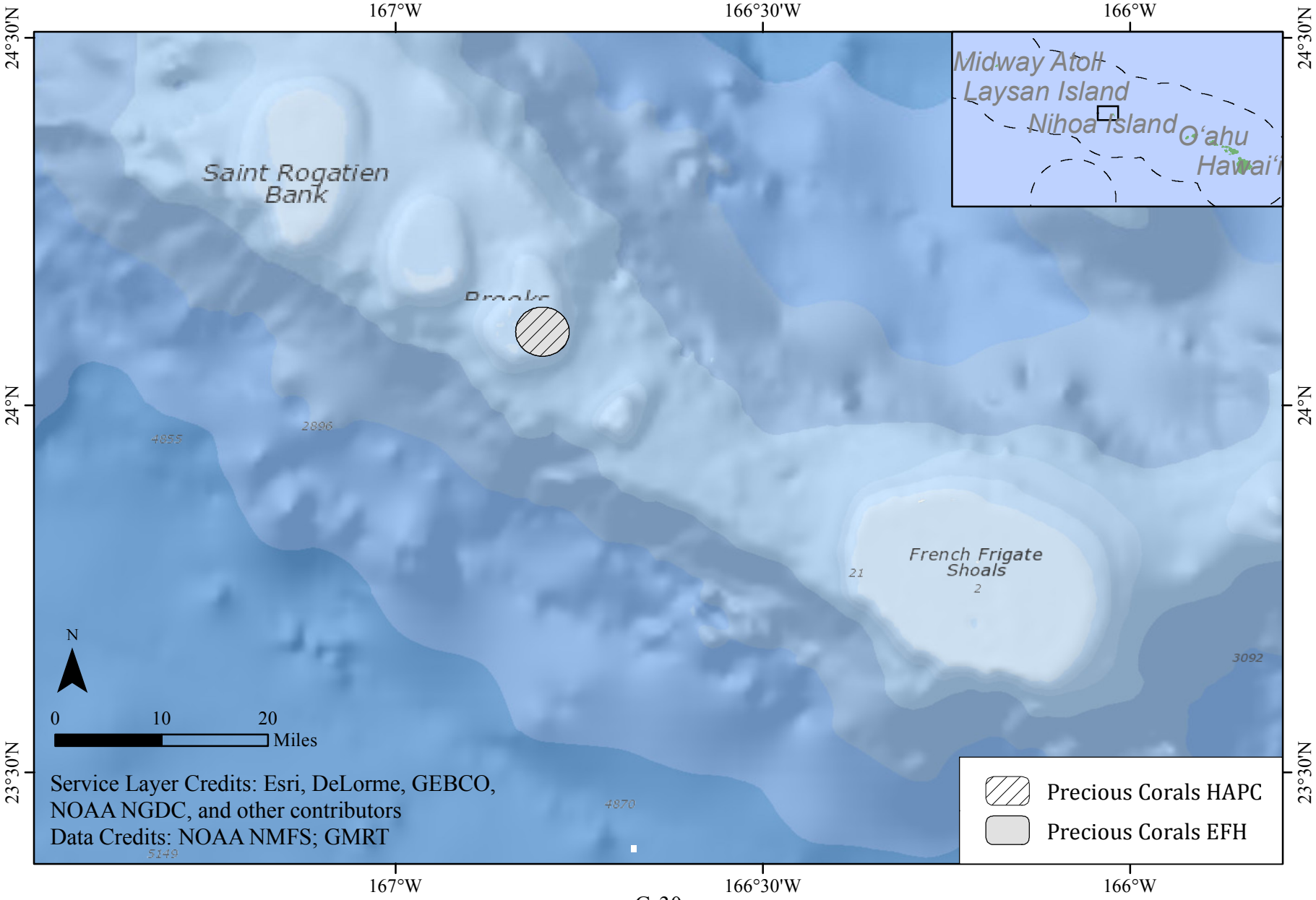
Hawaiian Archipelago Fishery Ecosystem Plan
Precious Corals Essential Fish Habitat: Kauai



Hawaiian Archipelago Fishery Ecosystem Plan
Precious Corals Essential Fish Habitat: Westpac Bed



Hawaiian Archipelago Fishery Ecosystem Plan
Precious Corals Essential Fish Habitat: Brooks Bank



Hawaiian Archipelago Fishery Ecosystem Plan
Precious Corals Essential Fish Habitat: 180 Fathom Bank