

STATUS OF FISHERIES OF THE UNITED STATES  
REPORT TO CONGRESS  
SEPTEMBER 1997

**Executive Summary**

The Sustainable Fisheries Act [SFA (Public Law 104-297)], which reauthorizes and amends the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) was signed into law by President Clinton on October 11, 1996. The reauthorized Magnuson-Stevens Act requires the Secretary of Commerce (Secretary) to report to Congress annually on the status of fisheries within each Council's geographical area of authority and identify those fisheries that are overfished or are approaching a condition of being overfished.

Although this report identifies a significant number of stocks that are overfished, the list will likely be expanded in the next year or two as the provisions of the SFA are fully implemented. In accordance with the requirements of the SFA, the basis for the identification of overfished stocks is the current overfishing definition found in the Fishery Management Plans (FMPs). The SFA also defined "overfished" and "overfishing," and required that FMP definitions, amended to be consistent with the new statutory definition, be submitted to the Secretary by October 11, 1998. As these new FMP definitions are submitted and approved, additional stocks will likely be identified as overfished.

Based on the criteria specified in the Magnuson-Stevens Act, the Report on the Status of Fisheries finds that 86 species are listed as "overfished," 183 species are listed as "not overfished," and 10 species are considered to be approaching an overfished condition; for 448 species, the status relative to overfishing is unknown. Whenever possible, species were assessed using existing overfishing definitions in FMPs or FMPs under development; the remainder were evaluated using the 1995 edition of Our Living Oceans.

## Introduction

This report to Congress responds to section 304(e)(1) of the Magnuson-Stevens Act, as amended by the SFA on October 11, 1996:

(1) The Secretary shall report annually to the Congress and the Councils on the status of fisheries within each Council's geographical area of authority and identify those fisheries that are overfished or are approaching a condition of being overfished. For those fisheries managed under a fishery management plan or international agreement, the status shall be determined using the criteria for overfishing specified in such plan or agreement. A fishery shall be classified as approaching a condition of being overfished if, based on trends in fishing effort, fishery resource size, and other appropriate factors, the Secretary estimates that the fishery will become overfished within two years.

This report constitutes the National Marine Fisheries Service's (NMFS) first annual report to Congress and the Councils in compliance with section 304(e)(1).

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## Listing of Species

There are currently 39 approved and implemented FMPs and 5 FMPs under development; there are numerous other fisheries in the U.S. EEZ for which there are no FMPs at this time. Some FMPs contain only one or a few species in the management unit, while others contain more than 100 species. To assess fully the status of the fish stocks within the U.S. EEZ, individual species were broken out to the extent possible for each fishery or FMP, and each species was separately assessed.

A table was created listing each species within a management unit identified in an FMP, the associated management body, a determination of whether the species is overfished, a determination of whether it is approaching an overfished condition, and the basis of the overfishing definition (see Table A1). Similar tables were created for species not contained in FMPs (Table A2), and for species contained in FMPs under development (Table A3). Species to be included in Table A2 were identified by NMFS as those for which a substantial portion of the stock occurs within the EEZ.

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## Basis for Determining Status of Overfishing

As required by section 304(e)(1) of the Magnuson-Stevens Act, for those species managed under an FMP or international agreement, the status determination was based on the criteria for overfishing (i.e., the overfishing definition) specified in the FMP or agreement whenever possible (see Appendices 1, 2, 3, and 4). For most species, the existing overfishing definitions are based wholly or in part on a fishing mortality rate. Such definitions typically assess the species on the basis of whether overfishing (as a rate of removals) is currently taking place (i.e., whether the current fishing mortality rate is greater than the maximum allowable rate specified in the definition). FMPs that base their definition on something other than a fishing mortality rate, such as stock biomass, typically assess overfishing of the species on the basis of the current status of the stock relative to a stock or index level specified in the definition of overfishing. To distinguish the type of definition applied, the tables include a column providing the basis of the overfishing definition.

For all species for which there is an approved overfishing definition contained in the FMP or an overfishing definition contained in the FMP under development, the status of the stock relative to the FMP definition was used to determine the status of the species and whether or not it is approaching an overfished condition. Species (1) for which there are no FMPs or international agreements, but that are under the Councils' geographic area of authority or under the Secretary's management authority pursuant to section 302(a)(3); (2) that are contained in an FMP or an FMP under development, but that do not have an overfishing definition; or (3) for which the overfishing definition is inadequate to make a determination of overfishing, the 1995 edition of Our Living Oceans (OLO) was used to determine the status relative to overfishing. In OLO, the term "overfishing" is not used, but a similar concept, which relates the stock size to the stock size that would produce "Long Term Potential Yield" (LTPY) is used. Species that are listed in OLO as "below" and "far below" stock levels necessary to produce LTPY are considered "overfished," and those listed as "near" and "above" stock levels necessary to produce LTPY are considered "not overfished." The SFA defines "overfished" as a rate or level of fishing mortality that jeopardizes the capacity of a fishery to produce the maximum sustainable yield (MSY) on a continuing basis. LTPY, as used in OLO, is analogous to MSY. Thus, the conclusions reached in OLO approximate the conclusions that would be drawn if an assessment had been made using the SFA's generic definition of "overfished." OLO determinations are considered stock level based definitions. Because OLO does not make a determination of whether the stock is "approaching an overfished condition," that determination could not be made for those species assessed using OLO. For species that have no overfishing definition or for which there is no determination of stock status in OLO, the overfished status is listed as "Unknown" and the basis of overfishing definition is listed as "No Definition."

Information regarding the overfished status of species is continually evolving and has become available since the most recent publication of OLO. For those cases for which there is updated information in a citable form, that information was used to determine the status of each species in this report. It is recognized that this approach may not include all "preliminary" information for each species. However, this approach is taken to minimize potential confusion as conclusions about stock conditions change with changes in "preliminary" information. For example, the conclusions reached in OLO regarding the overfished status of spiny dogfish, Atlantic halibut, and tilefish may not agree with additional, not yet citable, information that has become available since the publication of OLO.

## Results

Using the methodology described above to assess the status of the fisheries, there are currently 86 species classified as "overfished," 183 species classified as "not overfished," 10 species that are "approaching an overfished condition," and 448 species whose status is unknown. The categories "not overfished" and "approaching an overfished condition" are mutually exclusive. Any species listed as "approaching an overfished condition" (because it is estimated that it will become "overfished" within 2 years) is not included in the "not overfished" category, even though it is currently not overfished. This is to eliminate double-counting of the species analyzed in this report.

The following table provides a breakdown of the assessed species:

Number of Stocks under Council's Geographical Area of Authority	Jurisdiction	Overfished	Not Overfished	Approaching Overfished Condition	Unknown
26	NEFMC	12	7	2	5
11	MAFMC	5	6	0	0
9	NEFMC / MAFMC	1	1	0	7
84	SAFMC	14	5	0	65
69	GMFMC	4	6	1	58
10	SAFMC / GMFMC	1	5	0	4
179	CFMC	3	1	0	175
109	PFMC	13	16	6	74
64	WPFMC	3	47	1	13
105	NPFMC	0	63	0	42
1	PFMC / NPFMC	0	1	0	0
50	HMS	26	21	0	3
8	ASMFC	4	3	0	1
2	GSMFC	0	1	0	1
<b>Total</b>		<b>86</b>	<b>183</b>	<b>10</b>	<b>448</b>

## Conclusion

Based on the identifications made in this report, the Councils are now required to develop programs to end overfishing and rebuild some 76 overfished stocks, and to prevent overfishing from occurring for the 10 stocks that are approaching an overfished condition. This involves at least 19 FMPs that will have to be submitted for approval within the next year. There are also 10 stocks that are overfished but are not covered by FMPs; plans must be developed to end overfishing and rebuild affected stocks in these fisheries in the same timeframe. The rebuilding programs must be as short as possible, but not exceed 10 years, except in cases where the biology of the stock of fish, other environmental conditions, or management measures under an international agreement in which the United States participates dictate otherwise.

The majority of stocks (61%) identified in this report were assessed as unknown in terms of their status relative to overfishing; there are 428 stocks that are contained in FMPs whose status is unknown and 20 stocks not contained in FMPs whose status is unknown. Additional efforts to obtain information necessary to assess these stocks will be required before their status can be determined. As the status of these stocks become known, some will require that measures be taken to end or prevent overfishing in fisheries managed under an FMP, and others will require that an FMP be developed.

Under the amended provisions of the Magnuson-Stevens Act, the Councils will be required to reassess each FMP for compliance with the overfishing provisions. Many of the FMPs will require amendments to bring them into conformance. In particular, each overfishing definition will need to be examined on the basis of its ability to ensure stock levels that can produce MSY on a

continuing basis, rather than simply addressing recruitment overfishing, as is typically the case in many existing FMPs. Based on this change, it is possible that many species that are now classified as "not overfished" in this report on the basis of a fishing mortality rate definition will ultimately be reassessed as "overfished" when the FMPs and overfishing definitions are amended

consistent with the new requirements of the Magnuson-Stevens Act. Consequently, this report represents a minimum number of overfished fisheries of the United States, and will probably understate the number of fisheries that will eventually be determined to be overfished.

**Table A1. Summary of Stock Status for Species Contained in Federal Fishery Management Plans**

Fishery Management Plan	Stock		Jurisdiction	Overfished?	Approaching Overfished Condition?	Basis of Overfishing Definition
Atlantic Sea Scallop	Atlantic Sea Scallop		NEFMC	Yes	N/A	Fishing Mortality Rate
Atlantic Salmon	Atlantic Salmon		NEFMC	Yes <sup>(1)</sup>	N/A	Stock Level
American Lobster	American Lobster		NEFMC	Yes	N/A	Fishing Mortality Rate
Northeast Multispecies	Cod	Gulf of Maine	NEFMC	Yes	N/A	Fishing Mortality Rate
		Georges Bank	NEFMC	No	No	Fishing Mortality Rate
Northeast Multispecies	Haddock	Georges Bank	NEFMC	No	No	Fishing Mortality Rate
		Gulf of Maine	NEFMC	Unknown	Unknown	Fishing Mortality Rate
Northeast Multispecies	Yellowtail Flounder	Georges Bank	NEFMC	No	No	Fishing Mortality Rate
		Southern New England	NEFMC	No	No	Fishing Mortality Rate
		Cape Cod	NEFMC	Unknown	Unknown	Fishing Mortality Rate
		Middle Atlantic	NEFMC	Unknown	Unknown	Fishing Mortality Rate
Northeast Multispecies	American Plaice		NEFMC	Yes	N/A	Fishing Mortality Rate
Northeast Multispecies	Redfish		NEFMC	No	No	Fishing Mortality Rate
Northeast Multispecies	Witch Flounder		NEFMC	Yes	N/A	Fishing Mortality Rate
Northeast Multispecies	White Hake		NEFMC	No	Yes	Stock Level
Northeast Multispecies	Pollock		NEFMC	Unknown	Unknown	Fishing Mortality Rate
Northeast Multispecies	Windowpane Flounder		NEFMC	Yes	N/A	Stock Level
Northeast Multispecies	Winter Flounder	Georges Bank	NEFMC	Unknown <sup>(2)</sup>	Unknown	Fishing Mortality Rate
		Gulf of Maine	NEFMC	Yes	N/A	Fishing Mortality Rate
		Southern New England	NEFMC	Yes	N/A	Fishing Mortality Rate
Northeast Multispecies	Silver Hake	Gulf of Maine / North Georges Bank	NEFMC	No	Yes	Stock Level
		South Georges Bank / Middle Atlantic	NEFMC	Yes	N/A	Stock Level
Northeast Multispecies	Red Hake		NEFMC	Yes	N/A	Stock Level
Northeast Multispecies	Ocean Pout		NEFMC	No	No	Stock Level
Summer Flounder, Scup, and Black Sea Bass	Scup		MAFMC	Yes	N/A	Fishing Mortality Rate
Summer Flounder, Scup, and Black Sea Bass	Summer Flounder		MAFMC	Yes	N/A	Fishing Mortality Rate
Summer Flounder, Scup, and Black Sea Bass	Black Sea Bass		MAFMC	Yes	N/A	Fishing Mortality Rate
Atlantic Bluefish	Bluefish (except Gulf of Mexico)		MAFMC	Yes	N/A	Fishing Mortality Rate
Atlantic Surf Clam and Ocean Quahog	Surf Clam		MAFMC	No	No	Fishing Mortality Rate
Atlantic Surf Clam and Ocean Quahog	Ocean Quahog		MAFMC	No	No	Fishing Mortality Rate
Atlantic Mackerel, Squid, and Butterfish	Squid	Illex	MAFMC	No	No	Fishing Mortality Rate
		Loligo	MAFMC	No	No	Fishing Mortality Rate
Atlantic Mackerel, Squid, and Butterfish	Atlantic Mackerel		MAFMC	No	No	Fishing Mortality Rate
Atlantic Mackerel, Squid, and Butterfish	Butterfish (Atlantic)		MAFMC	No	No	Fishing Mortality Rate / Stock Level
South Atlantic Golden Crab	Golden Crab		SAFMC	No	No	Fishing Mortality Rate
South Atlantic Shrimp	White Shrimp		SAFMC	No	No	Stock Level
South Atlantic Shrimp	Rock Shrimp		SAFMC	No	No	Fishing Mortality Rate
South Atlantic Shrimp	Brown Shrimp		SAFMC	No	No	Fishing Mortality Rate
South Atlantic Shrimp	Pink Shrimp		SAFMC	No	No	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Jewfish		SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Nassau Grouper		SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Vermilion Snapper		SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Red Porgy		SAFMC	Yes	N/A	Fishing Mortality Rate

South Atlantic Snapper-Grouper	Gag	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Red Snapper	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Scamp	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Speckled Hind	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Snowy Grouper	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Warsaw Grouper	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Golden Tilefish	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	White Grunt	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Black Sea Bass	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Gray Triggerfish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Queen Triggerfish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Ocean Triggerfish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Yellow Jack	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Blue Runner	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Crevalle Jack	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Bar Jack	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Greater Amberjack	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Lesser Amberjack	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Almaco Jack	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Banded Rudderfish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Spadefish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Black Margate	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Porkfish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Margate	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Tomtate	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Smallmouth Grunt	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	French Grunt	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Spanish Grunt	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Cottonwick	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Sailors Choice	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Blue Stripe Grunt	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Hogfish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Puddingwife	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Black Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Queen Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Mutton Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Schoolmaster	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Blackfin Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Cubera Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Gray Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Mahogany Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Dog Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Lane Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Silk Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Yellowtail Snapper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Blueline Tilefish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Sand Tilefish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Wreckfish	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Bank Sea Bass	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Rock Sea Bass	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Rock Hind	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Graysby	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Yellowedge Grouper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Coney	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Red Hind	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Red Grouper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Misty Grouper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Black Grouper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Yellowmouth Grouper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Tiger Grouper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Yellowfin Grouper	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Sheepshead	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Grass Porgy	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Jolthead Porgy	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Saucereye Porgy	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Whitebone Porgy	SAFMC	Unknown	Unknown	Fishing Mortality Rate

South Atlantic Snapper-Grouper	Knobbed Porgy	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Longspine Porgy	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Snapper-Grouper	Scup	SAFMC	Unknown	Unknown	Fishing Mortality Rate
Atlantic Coast Red Drum	Red Drum	SAFMC	Yes	N/A	Fishing Mortality Rate
South Atlantic Corals <sup>(3)</sup>	Fire Corals	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Corals <sup>3</sup>	Hydrocorals	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Corals <sup>3</sup>	Octocorals	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Corals <sup>3</sup>	Stony Corals	SAFMC	Unknown	Unknown	Fishing Mortality Rate
South Atlantic Corals <sup>3</sup>	Black Corals	SAFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Mexico Stone Crab	Stone Crab	GMFMC	No	No	Stock Level
Gulf of Mexico Shrimp	Brown Shrimp	GMFMC	No	No	Stock Level
Gulf of Mexico Shrimp	Pink Shrimp	GMFMC	No	No	Stock Level
Gulf of Mexico Shrimp	White Shrimp	GMFMC	No	No	Stock Level
Gulf of Mexico Shrimp	Royal Red Shrimp	GMFMC	No	No	Fishing Mortality Rate
Gulf of Mexico Shrimp	Rock Shrimp	GMFMC	Unknown	Unknown	No Definition <sup>(4)</sup>
Gulf of Mexico Shrimp	Seabob Shrimp	GMFMC	Unknown	Unknown	No Definition <sup>4</sup>
Gulf of Mexico Corals <sup>(5)</sup>	Fire Corals	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Mexico Corals <sup>5</sup>	Hydrocorals	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Mexico Corals <sup>5</sup>	Octocorals	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Mexico Corals <sup>5</sup>	Stony Corals	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Mexico Corals <sup>5</sup>	Black Corals	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Mexico / South Atlantic Spiny Lobster	Spiny Lobster	SAFMC / GMFMC	No	No	Stock Level
Gulf of Mexico / South Atlantic Spiny Lobster	Slipper Lobster	SAFMC / GMFMC	Unknown	Unknown	No Definition <sup>(6)</sup>
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	King Mackerel Gulf group	SAFMC / GMFMC	Yes	N/A	Fishing Mortality Rate
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	King Mackerel Atlantic group	SAFMC / GMFMC	No	No	Fishing Mortality Rate
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	Spanish Mackerel Gulf group	SAFMC / GMFMC	No	No	Fishing Mortality Rate
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	Spanish Mackerel Atlantic group	SAFMC / GMFMC	No	No	Fishing Mortality Rate
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	Cobia	SAFMC / GMFMC	No	No	Fishing Mortality Rate
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	Cero	SAFMC / GMFMC	Unknown	Unknown	No Definition <sup>4</sup>
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	Dolphin	SAFMC / GMFMC	Unknown	Unknown	No Definition <sup>4</sup>
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	Little Tunny	SAFMC / GMFMC	Unknown	Unknown	No Definition <sup>6</sup>
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	Bluefish (Gulf of Mexico only)	GMFMC	Unknown	Unknown	No Definition <sup>6</sup>
Reef Fish Resources of the Gulf of Mexico	Red Snapper	GMFMC	Yes	N/A	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Nassau Grouper	GMFMC	Yes	N/A	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Jewfish	GMFMC	Yes	N/A	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Vermilion Snapper	GMFMC	No	Yes	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Greater Amberjack	GMFMC	No	No	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Gray Triggerfish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Queen Triggerfish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Lesser Amberjack	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Almaco Jack	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Banded Rudderfish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Tomtate	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	White Grunt	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Pigfish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Hogfish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Queen Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Mutton Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Schoolmaster	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Blackfin Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Cubera Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Gray (Mangrove) Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Dog Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Mahogany Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Lane Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate

Reef Fish Resources of the Gulf of Mexico	Late Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Silk Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Yellowtail Snapper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Wenchman	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Goldface Tilefish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Blackline Tilefish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Anchor Tilefish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Blueline Tilefish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Tilefish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Bank Sea Bass	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Rock Sea Bass	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Black Sea Bass	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Dwarf Sand Perch	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Sand Perch	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Rock Hind	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Speckled Hind	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Yellowedge Grouper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Red Hind	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Red Grouper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Misty Grouper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Warsaw Grouper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Snowy Grouper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Black Grouper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Yellowmouth Grouper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Gag	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Scamp	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Yellowfin Grouper	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Grass Porgy	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Jolthead Porgy	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Knobbed Porgy	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Littlehead Porgy	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Pinfish	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Reef Fish Resources of the Gulf of Mexico	Red Porgy	GMFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Mexico Red Drum	Red Drum	GMFMC	Yes	N/A	Fishing Mortality Rate
Caribbean Spiny Lobster <sup>(7)</sup>	Spiny Lobster	CFMC	No	Unknown <sup>(8)</sup>	Fishing Mortality Rate
Caribbean Reef Fish <sup>(9)</sup>	Nassau Grouper	CFMC	Yes	N/A	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Jewfish	CFMC	Yes	N/A	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Ocean Surgeonfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Doctorfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Blue Tang	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Frogfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Flamefish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Conchfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Trumpetfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Scrawled Filefish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Queen Triggerfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Whitespotted Filefish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Ocean Triggerfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Black Durgon	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Sargassum Triggerfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Redlip Blenny	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Peacock Flounder	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellow Jack	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Blue Runner	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Horse-eye Jack	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Black Jack	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Bar Jack	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Greater Amberjack	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Almaco Jack	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Longsnout Butterflyfish	CFMC	Unknown	Unknown	Fishing Mortality Rate

Caribbean Reef Fish <sup>9</sup>	Longspine Butterflyfish	CFMC	UNKNOWN	UNKNOWN	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Foureye Butterflyfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Spotfin Butterflyfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Banded Butterflyfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Redspotted Hawkfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Flying Gurnard	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Atlantic Spadefish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Neon Goby	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Rusty Goby	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Royal Gramma	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Porkfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Margate	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Tomtate	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	French Grunt	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	White Grunt	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Bluestriped Grunt	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Squirrelfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Longspine Squirrelfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Blackbar Soldierfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Cardinal Soldierfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Spanish Hogfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Creole Wrasse	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellowcheek Wrasse	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellowhead Wrasse	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Clown Wrasse	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Puddingwife	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Pearly Razorfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Green Razorfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Hogfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Bluehead Wrasse	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Black Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Queen Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Mutton Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Schoolmaster	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Blackfin Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Gray Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Dog Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Mahogany Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Lane Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Silk Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellowtail Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Wenchman	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Vermilion Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Blackline Tilefish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Sand Tilefish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellow Goatfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Spotted Goatfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Chain Moray	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Green Moray	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Goldentail Moray	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Batfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Goldspotted Eel	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellowhead Jawfish	CFMC	Unknown	Unknown	Fishing Mortality Rate

Caribbean Reef Fish <sup>9</sup>	Dusky Jawfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Spotted Trunkfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Honeycomb Cowfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Scrawled Cowfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Trunkfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Smooth Trunkfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Cherubfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Queen Angelfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Rock Beauty	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Gray Angelfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	French Angelfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Sergeant Major	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Blue Chromis	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Sunshinefish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellowtail Damsel fish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Dusky Damsel fish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Beaugregory	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Bicolor Damsel fish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Threespot Damsel fish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Bigeye	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Glasseye Snapper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Midnight Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Blue Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Striped Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Rainbow Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Princess Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Queen Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Redband Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Redtail Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Redfin Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Stoplight Parrotfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	High-hat	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Jackknife-fish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Spotted Drum	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Scorpionfishes	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Rock Hind	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Graysby	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellowedge Grouper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Coney	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Red Hind	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Red Grouper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Misty Grouper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Butter Hamlet	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Swissguard Basslet	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Yellowfin Grouper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Tiger Grouper	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Creole-fish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Greater Soapfish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Orangeback Bass	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Lantern Bass	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Tobaccofish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Harlequin Bass	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Chalk Bass	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Caribbean Tonguefish	CFMC	Unknown	Unknown	Fishing Mortality Rate

Caribbean Reef Fish <sup>9</sup>	Sea Bream	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Jolthead Porgy	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Sheepshead Porgy	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Pluma	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Seahorses	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Pipefishes	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Sand Diver	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Sharpnose Puffer	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Reef Fish <sup>9</sup>	Porcupinefish	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Queen Conch <sup>(10)</sup>	Queen Conch	CFMC	Yes	N/A	Fishing Mortality Rate
Caribbean Queen Conch <sup>10</sup>	Atlantic Triton's Trumpet	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Cameo Helmet	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Caribbean Helmet	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Caribbean Vase	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Flame Helmet	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Green Star Shell	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Hawkwing Conch	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Milk Conch	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Roostertail Conch	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	True Tulip	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	West Indian Fighting Conch	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Queen Conch <sup>10</sup>	Whelk (West Indian Top Shell)	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Corals <sup>(11)</sup>	Sponges	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Hydrocorals	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Hydroids	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Soft Corals	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Gorgonian Corals	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Hard Corals	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Black Corals	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Anemones	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Colonial Anemones	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	False Corals	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Annelid Worms	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Other Gastropods	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Bivalves	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Cephalopods	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Crustaceans	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Bryozoans	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Feather Stars	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Sea Stars	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Brittle and Basket Stars	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Sea Urchins	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Sea Cucumbers	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Tunicates	CFMC	Unknown	Unknown	Fishing Mortality Rate
Caribbean Corals <sup>11</sup>	Green Algae	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Corals <sup>11</sup>	Red Algae	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
Caribbean Corals <sup>11</sup>	Seagrasses	CFMC	Unknown	Unknown	No Definition <sup>6</sup>
WA, OR, CA Salmon	Chum Salmon	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Columbia River, upriver Summer)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Columbia River, upriver Spring)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Columbia River, Snake River, Spring)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Skagit River, Spring)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Skagit River, Summer /	PFMC	Yes	N/A	Stock Level

Stock Name	Stock	PFMC	Yes	No	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Stillaguamish River, Summer / Fall)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Snohomish River, Summer / Fall)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Lake Washington)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Chinook Salmon (Dungeness River)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	Coho Salmon (Strait of Juan de Fuca)	PFMC	Yes	N/A	Stock Level
WA, OR, CA Salmon	other Chinook Salmon stocks	PFMC	No	No	Stock Level
WA, OR, CA Salmon	other Coho Salmon stocks	PFMC	No	No	Stock Level
WA, OR, CA Salmon	Pink Salmon	PFMC	No	No	Stock Level
WA, OR, CA Salmon	Sockeye Salmon	PFMC	No	No	Stock Level
Northern Anchovy	Northern Anchovy	PFMC	No	No	Stock Level
WA, OR, CA Groundfish	Lingcod	PFMC	No	Yes	Fishing Mortality Rate
WA, OR, CA Groundfish	Canary Rockfish	PFMC	No	Yes	Fishing Mortality Rate
WA, OR, CA Groundfish	Pacific Ocean Perch	PFMC	No	Yes	Fishing Mortality Rate
WA, OR, CA Groundfish	Shortspine Thornyhead	PFMC	No	Yes	Fishing Mortality Rate
WA, OR, CA Groundfish	Bocaccio	PFMC	No	Yes	Fishing Mortality Rate
WA, OR, CA Groundfish	Yellowtail Rockfish	PFMC	No	Yes	Fishing Mortality Rate
WA, OR, CA Groundfish	Pacific Whiting	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	Sablefish	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	Dover Sole	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	English Sole	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	Petrale Sole	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	Chilipepper Rockfish	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	Shortbelly Rockfish	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	Longspine Thornyhead	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	Widow Rockfish	PFMC	No	No	Fishing Mortality Rate
WA, OR, CA Groundfish	Jack Mackerel	PFMC	No	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Pacific Cod	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Arrowtooth Flounder	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Butter Sole	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Curlfin Sole	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Flathead Sole	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Pacific Sanddab	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Rex Sole	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Rock Sole	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Sand Sole	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Starry Flounder	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Aurora Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Bank Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Black Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Black-and-Yellow Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Blackgill Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Blue Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Bronzespotted Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Brown Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Calico Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	China Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Copper Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Darkblotched Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Dusty Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Flag Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Gopher Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Grass Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Greenblotched Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Greenspotted Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Greenstriped Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Harlequin Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Honeycomb Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Kelp Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Mexican Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Olive Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Pink Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Quillback Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Redbanded Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate

WA, OR, CA Groundfish	Redstripe Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Rosethorn Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Rosy Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Rougeye Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Sharpchin Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Shorthead Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Silvergray Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Speckled Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Splitnose Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Squarespot Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Starry Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Stripetail Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Tiger Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Vermilion Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Yelloweye Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Yellowmouth Rockfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Leopard Shark	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Southern Shark	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Spiny Dogfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Big Skate	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	California Skate	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Longnose Skate	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Ratfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Fingerling Codling	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Pacific Rattail	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Cabezon	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Kelp Greenling	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	California Scorpionfish	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Cowcod	PFMC	Unknown	Unknown	Fishing Mortality Rate
WA, OR, CA Groundfish	Treefish	PFMC	Unknown	Unknown	Fishing Mortality Rate
Western Pacific Crustaceans	Spiny Lobster (2 species)	WPFMC	No	No	Stock Level
Western Pacific Crustaceans	Slipper Lobster	WPFMC	No	No	Stock Level
Western Pacific Corals <a href="#">(12)</a>	Pink Corals (3 species)	WPFMC	No	No	Stock Level
Western Pacific Corals <sup>12</sup>	Gold Corals (4 species)	WPFMC	No	No	Stock Level
Western Pacific Corals <sup>12</sup>	Bamboo Corals (2 species)	WPFMC	No	No	Stock Level
Western Pacific Corals <sup>12</sup>	Black Corals (3 species)	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Pelagic Armorhead	WPFMC	Yes	N/A	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Squirrelfish Snapper (Main Hawaiian Islands)	WPFMC	Yes	N/A	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Longtail Snapper (Main Hawaiian Islands)	WPFMC	Yes	N/A	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Seabass (Main Hawaiian Islands)	WPFMC	No	Yes	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Squirrelfish Snapper (Northwest Hawaiian Islands)	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Longtail Snapper (Northwest Hawaiian Islands)	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Silverjaw Jobfish	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Gray Jobfish	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Bluestripe Snapper	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Yellowtail Snapper	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Pink Snapper	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Yelloweye Snapper	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Snapper <u>Pristipomoides sieboldii</u>	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Snapper <u>Pristipomoides zonatus</u>	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Giant Trevally	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Black Jack	WPFMC	No	No	Stock Level

Bottomfish and Seamount Groundfish of the Western Pacific	Thick Lipped Trevally	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Amberjack	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Blacktip Grouper	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Seabass (Northwest Hawaiian Islands)	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Lunartail Grouper	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Ambon Emperor	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Redgill Emperor	WPFMC	No	No	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Alfonsin	WPFMC	Unknown	Unknown	Stock Level
Bottomfish and Seamount Groundfish of the Western Pacific	Ratfish	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Yellowfin Tuna (Central Western Pacific)	WPFMC	No	No	Stock Level
Western Pacific Pelagics	Albacore (South Pacific)	WPFMC	No	No	Stock Level
Western Pacific Pelagics	Albacore (North Pacific)	WPFMC	No	No	Stock Level
Western Pacific Pelagics	Yellowfin Tuna (Eastern Tropical Pacific)	WPFMC	No	No	Stock Level
Western Pacific Pelagics	Skipjack Tuna (Central Western Pacific)	WPFMC	No	No	Stock Level
Western Pacific Pelagics	Skipjack Tuna (Eastern Tropical Pacific)	WPFMC	No	No	Stock Level
Western Pacific Pelagics	Striped Marlin	WPFMC	No	No	Stock Level
Western Pacific Pelagics	Black Marlin	WPFMC	No	Unknown	Stock Level
Western Pacific Pelagics	Bigeye Tuna (Pacific)	WPFMC	No	Unknown	Stock Level
Western Pacific Pelagics	Other tuna relatives Auxis spp.	WPFMC	No	Unknown	Stock Level
Western Pacific Pelagics	Other tuna relatives Scomber spp.	WPFMC	No	Unknown	Stock Level
Western Pacific Pelagics	Other tuna relatives Alltothunnus spp.	WPFMC	No	Unknown	Stock Level
Western Pacific Pelagics	Swordfish (Pacific)	WPFMC	No	Unknown	Stock Level
Western Pacific Pelagics	Sailfish (Pacific)	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Shortbill Spearfish (Pacific)	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Wahoo (Pacific)	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Mahimahi (Pacific)	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Pelagic Sharks (Pacific)	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Blue Marlin (Pacific)	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Opah	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Oilfish	WPFMC	Unknown	Unknown	Stock Level
Western Pacific Pelagics	Escolar	WPFMC	Unknown	Unknown	Stock Level
Gulf of Alaska Groundfish	Walleye Pollock	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Pacific Cod	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Sablefish	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Atka Mackerel	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Thornyhead Rockfish	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Dusky Rockfish	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Dover Sole	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Flathead Sole	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Rex Sole	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Arrowtooth Flounder	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Pacific Ocean Perch	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Shortraker Rockfish	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Rougeye Rockfish	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Sculpins	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Sharks	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Skates	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Eulachon	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Smelts	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Capelin	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Rock Sole	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Rattail	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Squid	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Octopus	NPFMC	No	No	Fishing Mortality Rate
Gulf of Alaska Groundfish	Greenland Turbot	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Black Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Blue Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Widow Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Yellowtail Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate

Gulf of Alaska Groundfish	Canary Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	China Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Copper Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Quillback Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Rosethorn Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Tiger Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Yelloweye Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Aurora Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Blackgill Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Bocaccio Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Chilipepper Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Darkblotch Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Greenstriped Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Harlequin Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Pygmy Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Redbanded Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Redstripe Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Sharpchin Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Shortbelly Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Silvergray Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Splitnose Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Stripetail Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Vermilion Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Gulf of Alaska Groundfish	Yellowmouth Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Alaska High Seas Salmon	Pink Salmon	NPFMC	No	No	Stock Level
Alaska High Seas Salmon	Sockeye Salmon	NPFMC	No	No	Stock Level
Alaska High Seas Salmon	Chum Salmon	NPFMC	No	No	Stock Level
Alaska High Seas Salmon	Coho Salmon	NPFMC	No	No	Stock Level
Alaska High Seas Salmon	Chinook Salmon	NPFMC	No	No	Stock Level
Bering Sea / Aleutian Islands Groundfish	Walleye Pollock	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Pacific Cod	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Yellowfin Sole	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Greenland Turbot	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Arrowtooth Flounder	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Rock Sole	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Flathead Sole	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Sablefish	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Pacific Ocean Perch	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Sharpchin / Northern Rockfish	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Shortraker / Rougheye Rockfish	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Atka Mackerel	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Squid	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Alaska Plaice	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Rex Sole	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Butter Sole	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Longhead Dab	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Dover Sole	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Starry Flounder	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Rattails	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Shortspine Thornyhead	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Sculpins	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Sharks	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Skates	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Eulachon	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Smelts	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Capelin	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Octopus	NPFMC	No	No	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Dusky Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Darkblotched Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Yelloweye Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea / Aleutian Islands Groundfish	Blue Rockfish	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Blue King Crab Pribilof Islands	NPFMC	No	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Blue King Crab Saint Matthew Island	NPFMC	No	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Blue King Crab Saint Lawrence Island	NPFMC	Unknown <sup>2</sup>	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Blue King Crab Brown King Crab Aleutians	NPFMC	Unknown	Unknown	Fishing Mortality Rate

Bering Sea/Aleutian Islands King & Tanner Crabs	Brown King Crab Bristol Bay Aleutians	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Brown King Crab Pribilof Islands	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Brown King Crab Northern District	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Red King Crab Bristol Bay	NPFMC	No	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Red King Crab Norton Sound	NPFMC	No	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Red King Crab Pribilof Islands	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea/Aleutian Islands King & Tanner Crabs	Red King Crab Aleutians	NPFMC	Unknown	Unknown	Fishing Mortality Rate
Bering Sea / Aleutian Islands King and Tanner Crabs	Bering Sea Snow Crab	NPFMC	No	Unknown	Fishing Mortality Rate
Bering Sea / Aleutian Islands King and Tanner Crabs	Tanner Crab Bering Sea	NPFMC	No	Unknown	Fishing Mortality Rate
Bering Sea / Aleutian Islands King and Tanner Crabs	Tanner Crab Eastern Aleutians	NPFMC	Unknown <sup>2</sup>	Unknown	Fishing Mortality Rate
Bering Sea / Aleutian Islands King and Tanner Crabs	Tanner Crab Adak (Western Aleutians)	NPFMC	Unknown <sup>2</sup>	Unknown	Fishing Mortality Rate
Alaska Scallops	Alaska Scallops	NPFMC	No	No	Fishing Mortality Rate
Atlantic Swordfish	Swordfish (North Atlantic)	HMS	Yes <sup>1</sup>	N/A	Stock Level
Atlantic Billfishes	Blue Marlin (North Atlantic)	HMS	Yes <sup>1</sup>	N/A	Stock Level
Atlantic Billfishes	White Marlin (North Atlantic)	HMS	Yes <sup>1</sup>	N/A	Stock Level
Atlantic Billfishes	Sailfish (West Atlantic)	HMS	Unknown	Unknown	No Definition <sup>4</sup>
Atlantic Billfishes	Spearfish (West Atlantic)	HMS	Unknown	Unknown	No Definition <sup>6</sup>
Atlantic Sharks	Sandbar Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Blacktip Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Dusky Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Spinner Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Silky Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Bull Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Bignose Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Narrowtooth Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Galapagos Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Night Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Caribbean Reef Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Tiger Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Lemon Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Sand Tiger Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Bigeye Sand Tiger Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Nurse Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Scalloped Hammerhead Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Great Hammerhead Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Smooth Hammerhead Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Whale Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Basking Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	White Shark	HMS	Yes	N/A	Fishing Mortality Rate
Atlantic Sharks	Atlantic Sharpnose Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Caribbean Sharpnose Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Finetooth Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Blacknose Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Smalltail Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Bonnethead Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Atlantic Angel Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Shortfin Mako Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Longfin Mako Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Porbeagle Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Thresher Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Bigeye Thresher Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Blue Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Oceanic Whitetip Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Sevengill Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Sixgill Shark	HMS	No	Unknown	Fishing Mortality Rate
Atlantic Sharks	Bigeye Sixgill Sharks	HMS	No	Unknown	Fishing Mortality Rate

**Table A2. Summary of Stock Status for Species not Contained in Federal Fishery Management Plans**

Stock	Jurisdiction	Overfished?	Approaching Overfished Condition?	Basis of Overfishing Definition
Atlantic Halibut	NEFMC	Yes <sup>(13)</sup>	N/A	Stock Level
Tilefish	MAFMC	Yes <sup>13</sup>	N/A	Stock Level
Little Skate	NEFMC / MAFMC	Unknown	Unknown	No Definition <sup>(14)</sup>
Winter Skate	NEFMC / MAFMC	Unknown	Unknown	No Definition <sup>14</sup>
Barndoor Skate	NEFMC / MAFMC	Unknown	Unknown	No Definition <sup>14</sup>
Thorny Skate	NEFMC / MAFMC	Unknown	Unknown	No Definition <sup>14</sup>
Brier Skate	NEFMC / MAFMC	Unknown	Unknown	No Definition <sup>14</sup>
Leopard Skate	NEFMC / MAFMC	Unknown	Unknown	No Definition <sup>14</sup>
Smooth-tailed Skate	NEFMC / MAFMC	Unknown	Unknown	No Definition <sup>14</sup>
Weakfish	ASMFC	Yes <sup>13</sup>	N/A	Stock Level
Spotted Seatrout	ASMFC	Yes <sup>13</sup>	N/A	Stock Level
Spot	ASMFC	Unknown	Unknown	No Definition <sup>(15)</sup>
Atlantic Croaker	ASMFC	Yes <sup>13</sup>	N/A	Stock Level
Atlantic Menhaden	ASMFC	No <sup>13</sup>	Unknown	Stock Level
Striped Bass	ASMFC	No <sup>13</sup>	Unknown	Stock Level
Northern Shrimp	ASMFC	No <sup>13</sup>	Unknown	Stock Level
Atlantic Sturgeon	ASMFC	Yes <sup>13</sup>	N/A	Stock Level
Gulf Menhaden	GSMFC	No <sup>13</sup>	Unknown	Stock Level
Black Drum	GSMFC	Unknown	Unknown	No Definition <sup>15</sup>
Pacific Bonito	PFMC	Unknown	Unknown	No Definition <sup>15</sup>
California Barracuda	PFMC	Unknown	Unknown	No Definition <sup>15</sup>
White Seabass	PFMC	Unknown	Unknown	No Definition <sup>15</sup>
White Croaker	PFMC	Unknown	Unknown	No Definition <sup>15</sup>
Yellowtail	PFMC	Unknown	Unknown	No Definition <sup>15</sup>
Giant Squid	PFMC	Unknown	Unknown	No Definition <sup>15</sup>
Mackerel Scad	WPFMC	Unknown	Unknown	No Definition <sup>15</sup>
Bigeye Scad	WPFMC	Unknown	Unknown	No Definition <sup>15</sup>
Pacific Halibut	PFMC and NPFMC <sup>(16)</sup>	No	No	Fishing Mortality Rate
Sea Snails	NPFMC	Unknown	Unknown	No Definition <sup>15</sup>

**Table A3. Species Contained in Federal Fishery Management Plans Under Development**

Stock	Jurisdiction	Overfished?	Approaching Overfished Condition?	Basis of Overfishing Definition
Bigeye Tuna (Atlantic)	HMS	No <sup>13</sup>	Unknown	Stock Level
Albacore (North Atlantic)	HMS	No <sup>13</sup>	Unknown	Stock Level
Yellowfin Tuna (West Atlantic)	HMS	No <sup>13</sup>	Unknown	Stock Level
Skipjack Tuna (West Atlantic)	HMS	No <sup>13</sup>	Unknown	Stock Level
Bluefin Tuna (West Atlantic)	HMS	Yes <sup>13</sup>	N/A	Stock Level
Bonito (Atlantic)	HMS	Unknown	Unknown	No Definition <sup>14</sup>
Atlantic Herring	NEFMC	No	No	Fishing Mortality Rate

Atlantic Herring	NEFMC	No	No	Fishing Mortality Rate
Monkfish	NEFMC / MAFMC	Yes	N/A	Stock Level
Spiny Dogfish	NEFMC / MAFMC	No <sup>13</sup>	Unknown	Stock Level
Pacific Sardine	PFMC	Yes <sup>13</sup>	N/A	Stock Level
Pacific (Chub) Mackerel	PFMC	Yes <sup>13</sup>	N/A	Stock Level
Jack Mackerel	PFMC	No <sup>13</sup>	Unknown	Stock Level
Market Squid	PFMC	Unknown	Unknown	No Definition <sup>14</sup>

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1. Used assessment from [Our Living Oceans](#); FMP contains no overfishing definition.
  2. Current fishing mortality estimate for this stock is unknown.
  3. The full name for this FMP is the Coral, Coral Reefs, and Live / Hard Bottom Habitats of the South Atlantic Region.
  4. There is no overfishing definition contained in the FMP; the definition for determining the overfished status is based on the definition in [Our Living Oceans](#).
  5. The full name for this FMP is the Coral and Coral Reefs of the Gulf of Mexico.
  6. There is no overfishing definition contained in the FMP, and no definition for determining the overfished status in [Our Living Oceans](#).
  7. The full name for this FMP is the Spiny Lobster Fishery of Puerto Rico and the U.S. Virgin Islands.
  8. Stock assessment is 6 years old.
  9. The full name for this FMP is the Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands.
  10. The full name for this FMP is the Queen Conch Resources of Puerto Rico and the U.S. Virgin Islands.
  11. The full name for this FMP is the Corals and Reef Associated Invertebrates of Puerto Rico and the U.S. Virgin Islands.
  12. The full name for this FMP is the Precious Corals Fishery of the Western Pacific Region.
  13. Used assessment from [Our Living Oceans](#); there is no FMP for this species.
  14. There is no FMP for this species, and no definition for determining the overfished status in [Our Living Oceans](#).
  15. There is no FMP for this species; the definition for determining the overfished status is based on the definition in [Our Living Oceans](#).
  16. The resource is managed by treaty between the United States and Canada through recommendations of the International Pacific Halibut Commission. Pacific halibut is managed under the jurisdiction of the PFMC for WA, OR, and CA and under the jurisdiction of the NPFMC for Alaska.
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## Appendix 1. Overfishing Definitions Contained in Fishery Management Plans

The following definitions are as contained in the Fishery Management Plans, with minor editing changes to maintain consistency of terms. See Appendix 5 for definitions of acronyms used in this appendix.

Atlantic Sea Scallop - Overfishing is defined as a fishing mortality rate that, if continued, results in a spawning stock biomass of 5% of the maximum spawning potential (MSP). The corresponding target fishing mortality (F) will be calculated as a level that will result in a 5% MSP under equilibrium conditions.

Atlantic Salmon - No overfishing definition exists in the FMP.

American Lobster - The American lobster resource is considered recruitment overfished when, throughout its range, the fishing mortality rate (F), given the regulations in place at that time under the suite of regional management measures, results in a reduction in estimated egg production per recruit to 10% or less of a non-fished population.

The development of the status of the stock report and the evaluation of the fishery induced effects will consider information based upon one or more indices including, but not limited to: Larval abundance index in surface waters; larval settlement index; pre-recruit indices by year-class; landings; size composition of the landings spawning stock biomass; numbers of egg-bearing females; effort levels and catch-per-unit-of-effort (CPUE); and possible development of relationships of biological parameters to water temperature or other environmental parameters.

#### Northeast Multispecies

**Cod (Gulf of Maine, Georges Bank)** - Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

**Haddock (Georges Bank, Gulf of Maine)** - Overfishing is defined for Gulf of Maine haddock as the fishing mortality rate associated with 20% MSP, and for Georges Bank haddock, the fishing mortality rate associated with 30% MSP.

**Yellowtail Flounder (Georges Bank, Southern New England, Cape Cod, Middle Atlantic)** - Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

**American Plaice** - Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

**Redfish** - Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

**Witch Flounder** - Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

**White Hake** - Overfishing occurs when the 3-year moving average of the species abundance index from the Northeast Fisheries Science Center's bottom trawl survey falls below the lowest quartile of the time series.

**Pollock** - Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

**Windowpane Flounder** - Overfishing occurs when the 3-year moving average of the species abundance index from the Northeast Fisheries Science Center's bottom trawl survey falls below the lowest quartile of the time series.

**Winter Flounder (Georges Bank, Gulf of Maine, Southern New England)** - Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

**Silver Hake (Gulf of Maine / Northern Georges Bank, Southern Georges Bank / Middle Atlantic)** - Overfishing occurs whenever the 4-year running average percent maximum spawning potential (%MSP) is less than the threshold %MSP, which is 31% for the Maine / Northern Georges Bank stock and 42% for the Southern Georges Bank / Mid-Atlantic stock.

**Red Hake** - Overfishing occurs when the 3-year moving average of the species abundance index from the Northeast Fisheries Science Center's bottom trawl survey falls below the lowest quartile of the time series.

**Ocean Pout** - Overfishing occurs when the 3-year moving average of the species abundance index from the Northeast Fisheries Science Center's bottom trawl survey falls below the lowest quartile of the time series.

#### Summer Flounder, Scup, and Black Sea Bass

**Scup** - Overfishing is defined as fishing in excess of  $F_{max}$ .

**Summer Flounder** - Overfishing is defined as fishing in excess of  $F_{max}$ .

**Black Sea Bass** - Overfishing is defined as fishing in excess of  $F_{max}$ .

Bluefish (except Gulf of Mexico) - Overfishing is defined as a level of fishing that exceeds the fishing mortality rate that results in the highest sustainable yield (MSY).

#### Surf Clams and Ocean Quahogs

**Surf Clam** - The overfishing definition for surf clams is the fishing mortality rate of  $F_{20\%}$  (20% of MSP).

**Ocean Quahog** - The overfishing definition for ocean quahogs is the fishing mortality rate of  $F_{25\%}$  (25% MSP).

### Atlantic Mackerel, Squid, and Butterfish

**Illex Squid** - Overfishing is defined as when the catch associated with a threshold fishing mortality of  $F_{20\%}$  is exceeded.

**Loligo Squid** - Overfishing is defined to occur when the catch associated with a threshold fishing mortality rate of  $F_{max}$  is exceeded.

**Atlantic Mackerel** - Overfishing is defined as the catch of Atlantic mackerel that exceeds the annual allowable biological catch (ABC) for the species. The fishing mortality rate associated with the total catch of Atlantic mackerel shall not exceed  $F_{0.1}$ . ABC is the allowable biological catch in U.S. waters for the upcoming year and C is defined as the quantity of mackerel that is expected to be caught in Canadian waters.  $ABC + C =$  Total catch of mackerel. In addition, a spawning stock size (S) of no less than 900,000 mt shall be maintained at the end of the fishing year for which estimates and quotas are being prepared.

**Butterfish (Atlantic)** - Overfishing is defined to occur when the 3-year moving average of pre-recruits from the Northeast Fisheries Science Center's autumn bottom trawl falls within the lowest quartile of the time series or when the landings exceed a threshold fishing mortality of  $F_{msy}$ .

**Golden Crab** - Overfishing is defined as any rate of fishing mortality in excess of  $F_{msy}$  for golden crab in the South Atlantic Council's management area.

### Shrimp Fishery of the South Atlantic

**White Shrimp** - Overfishing is indicated when the overwintering white shrimp population within a state's water declines by 80% or more following severe winter weather resulting in prolonged cold water temperatures. Continued fishing following such a decline may reduce the reproductive capacity of the stock affecting subsequent recruitment and would be considered overfishing.

**Rock Shrimp** - The South Atlantic rock shrimp resource is overfished when the annual landings exceed the value which is two standard deviations above mean landings for the period 1986-1994. This level, based on the more accurate state data, is approximately 6,829,449 pounds, heads on.

**Brown Shrimp** - The South Atlantic brown shrimp resources are overfished when annual landings fall below two standard deviations below mean landings for the period 1957-1993 for 3 consecutive years (2,946,157 pounds, heads on).

**Pink Shrimp** - The South Atlantic pink shrimp resources are overfished when annual landings fall below two standard deviations below mean landings for the period 1957-1993 for 3 consecutive years (286,293 pounds, heads on).

### South Atlantic Snapper-Grouper

#### **Jewfish**

1. Jewfish are overfished when the stock is below the level of 40% of the spawning stock biomass per recruit that would occur in the absence of fishing.
2. When jewfish are overfished, overfishing is defined as harvesting at a rate that is not consistent with a program that has been established to rebuild the stock or stock complex to the 40% spawning stock biomass per recruit level.
3. When jewfish are not overfished, overfishing is defined as a harvesting rate that, if continued, would lead to a state of the stock or stock complex that would not at least allow a harvest of OY on a continuing basis.
4. The threshold level is 30% SSBR; below this level, no harvest or possession of jewfish is allowed.

Note: The definition of Optimum Yield for jewfish is 40% SSBR.

**Nassau Grouper, Vermilion Snapper, Red Porgy, Gag, Red Snapper, Scamp, Speckled Hind, Snowy Grouper, Warsaw Grouper, Golden Tilefish, White Grunt, Black Sea Bass, Gray Triggerfish, Queen Triggerfish, Ocean Triggerfish, Yellow Jack, Blue Runner, Crevalle Jack, Bar Jack, Greater Amberjack, Lesser Amberjack, Almaco Jack, Banded Rudderfish, Spadefish, Black Margate, Porkfish, Margate, Tomtate, Smallmouth Grunt, French Grunt, Spanish Grunt, Cottonwick, Sailors Choice, Blue Stripe Grunt, Hogfish, Puddingwife, Black Snapper, Queen Snapper, Mutton Snapper, Schoolmaster, Blackfin Snapper, Cubera Snapper, Gray Snapper, Mahogany Snapper, Dog Snapper, Lane Snapper, Silk Snapper, Yellowtail Snapper, Blueline Tilefish, Sand Tilefish, Wreckfish, Bank Sea Bass, Rock Sea Bass, Rock Hind, Graysby, Yellowedge Grouper, Coney, Red Hind, Red Grouper, Misty Grouper, Black Grouper, Yellowmouth Grouper, Tiger Grouper, Yellowfin Grouper, Sheepshead, Grass Porgy, Jolthead Porgy, Saucereye Porgy, Whitebone Porgy, Knobbed Porgy, Longspine Porgy, Scup -**

1. A snapper-grouper stock or stock complex is overfished when it is below the level of 30% of the spawning stock biomass per recruit that would occur in the absence of fishing.
2. When a snapper-grouper stock or stock complex is overfished, overfishing is defined as harvesting at a rate that is not consistent with a program that has been established to rebuild the stock or stock complex to the 30% spawning stock biomass per recruit level.
3. When a snapper-grouper stock or stock complex is not overfished, overfishing is defined as a harvesting rate that, if continued, would lead to a state of the stock or stock complex that would not at least allow a harvest of OY on a continuing basis.

Note: For a snapper-grouper stock or stock complex, Optimum Yield is defined as 30% SSBR.

Red Drum (Atlantic coast) - Overfishing is defined as a fishing mortality rate that will, if continued, reduce the spawning potential ratio (SPR) below 30% of the level that would exist at equilibrium without fishing.

#### Coral, Coral Reefs, and Live / Hard Bottom Habitats of the South Atlantic Region

**Fire Corals, Hydrocorals, Octocorals, Stony Corals, Black Corals** - Overfishing is defined as an annual level of harvest that exceeds optimum yield (OY). OY for coral reefs, stony corals, hydrocorals, black corals, seafans, and live rock is zero, except as may be authorized for scientific and educational purposes. Harvest of allowable octocorals in the EEZ is not to exceed 50,000 colonies per year (Gulf and South Atlantic EEZ combined).

Stone Crab - Overfishing exists when the realized egg production per recruit is reduced below 70% of potential production. Overfishing will be avoided when there is a minimum claw length (length of propodus) that assures survival of the crabs to achieve 70% egg production per recruit potential.

#### Shrimp Fishery of the Gulf of Mexico

**Brown Shrimp** - Recruitment overfishing is indicated where parent stock levels are reduced below 125 million shrimp. This value is slightly lower than the 1983 level of parent stock, which is the lowest observed value since 1960. Parent stock is defined for brown shrimp as the number of age 7+ (months) shrimp during the November through February period.

**Pink Shrimp** - Recruitment overfishing in the eastern Gulf of Mexico (statistical areas 1-12) is indicated where parent stock levels are reduced below 100 million shrimp. Parent stock is defined for pink shrimp as the number of 5+ (months) shrimp during the July through June period. Pink shrimp in the western U.S. Gulf were not included in this definition because mixed catches of brown and pink shrimp are not separated and are landed, sold, and statistically treated as brown shrimp.

**White Shrimp** - Recruitment overfishing is indicated where parent stock levels are reduced below 330 million shrimp. Parent stock is defined for pink shrimp as the number of age 7+ (months) shrimp during the May through August period.

**Royal Red Shrimp** - Recruitment overfishing is defined as fishing greater than optimum yield (OY). OY is set at MSY (maximum sustainable yield), which was estimated to be 392,000 pounds of tails over 1,290 days fished. Royal red shrimp differ from penaeid shrimp in that they are not estuarine dependent but exist in a relatively constant environment in the deeper waters of the Gulf of Mexico (100 to 300 fathoms). Thus, they conform more closely to a classical Schaefer-type fishery.

**Rock Shrimp, Seabob Shrimp** - No overfishing definition exists in the FMP.

#### Coral and Coral Reefs of the Gulf of Mexico

**Fire Corals, Hydrocorals, Octocorals, Stony Corals, Black Corals** - Overfishing is defined as an annual level of harvest that exceeds optimum yield (OY). OY for coral reefs, stony corals, hydrocorals, black corals, seafans, and live rock is zero, except as may be authorized for scientific and educational purposes. Harvest of allowable octocorals in the EEZ is not to exceed 50,000 colonies per year (Gulf and South Atlantic EEZ combined).

#### Spiny Lobster Fishery of the South Atlantic and Gulf of Mexico

**Spiny Lobster** - Overfishing exists when the eggs-per-recruit (EPR) ratio of the exploited population to the unexploited population is reduced below 5% and recruitment of small lobsters into the fishery has declined for 3 consecutive fishing years. Overfishing will be avoided when the EPR ratio of exploited to unexploited populations is maintained above 5%.

**Slipper Lobster** - No overfishing definition exists in the FMP.

#### Coastal Migratory Pelagics of the South Atlantic and Gulf of Mexico

**Gulf and Atlantic group King Mackerel, Gulf and Atlantic group Spanish Mackerel, Cobia** A mackerel and cobia stock shall be considered overfished if the spawning potential ratio (SPR) is less than the target level percentage recommended by the assessment panel, approved by the Scientific and Statistical Committee (SSC) and adopted by the Councils. The target level percentage shall not be less than 20%. Based on the recommendation of the assessment panel and approved by the SSC, the Councils and the Regional Director have approved a SPR of 30% for king and Spanish mackerel. No SPR estimate has been calculated for cobia. In the absence of an SPR estimate, an MSY of 2.2 million pounds is substituted. The MSY is based on the average annual landings (commercial and recreational) for the period 1984 - 1991.

**Cero, Dolphin, Little Tunny, Bluefish** (Gulf of Mexico only) - No overfishing definition exists in the FMP.

#### Reef Fish of the Gulf of Mexico

**Red Snapper, Nassau Grouper, Jewfish, Vermilion Snapper, Greater Amberjack, Gray Triggerfish, Queen Triggerfish, Lesser Amberjack, Almaco Jack, Banded Rudderfish, Tomtate, White Grunt, Pigfish, Hogfish, Queen Snapper, Mutton Snapper, Schoolmaster, Blackfin Snapper, Cubera Snapper, Gray (Mangrove) Snapper, Dog Snapper, Mahogany Snapper, Lane Snapper, Silk Snapper, Yellowtail Snapper, Wenchman, Goldface Tilefish, Blackline Tilefish, Anchor Tilefish, Blueline Tilefish, Tilefish, Bank Sea Bass, Rock Sea Bass, Black Sea Bass, Dwarf Sand Perch, Sand Perch, Rock Hind, Speckled Hind, Yellowedge Grouper, Red Hind, Red Grouper, Misty Grouper, Warsaw Grouper, Snowy Grouper, Black Grouper, Yellowmouth Grouper, Gag, Scamp, Yellowfin Grouper, Grass Porgy, Jolthead Porgy, Knobbed Porgy, Littlehead Porgy, Pinfish, Red Porgy** - A reef fish stock is overfished when it is below the level of 20% of the spawning potential ratio (SPR) that would occur in the absence of fishing.

When a reef fish stock or stock complex is overfished, overfishing is defined as harvesting at a rate that is not consistent with a program that has been established to rebuild the stock or stock complex to the 20% SPR level.

When a reef fish stock or stock complex is not overfished, overfishing is defined as a harvesting rate that if continued would lead to a state of the stock or stock complex that would not at least allow a harvest of optimum yield on a continuing basis.

Red Drum - (Gulf of Mexico) Overfishing is defined as a fishing mortality that prohibits attaining the spawning stock goal or threshold, which is currently set at a 20% spawning stock biomass ratio.

Spiny Lobster (Caribbean) - A spiny lobster stock or stock complex is overfished when it is below the level of 20% of the Spawning Potential Ratio (SPR).

When a spiny lobster stock or stock complex is overfished, overfishing is defined as the harvesting rate that is not consistent with a program that has been established to rebuild the stock or stock complex to the 20% SPR.

When a spiny lobster stock or stock complex is not overfished, overfishing is defined as a harvesting rate that, if continued, would lead to a state that would not allow harvest at OY on a continuing basis.

The SPR for spiny lobsters is measured in terms of eggs per recruit. For monitoring the SPR, the method described by Gregory *et al.* (1982) will be used to compare female fecundity by length class within fished areas to that in unfished areas.

#### Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands

**Nassau Grouper, Jewfish, Ocean Surgeonfish, Doctorfish, Blue Tang, Frogfish, Flamefish, Conchfish, Trumpetfish, Scrawled Filefish, Queen Triggerfish, Whitespotted Filefish, Ocean Triggerfish, Black Durgon, Sargassum Triggerfish, Redlip Blenny, Peacock Flounder, Yellow Jack, Blue Runner, Horse-eye Jack, Black Jack, Bar Jack, Greater Amberjack, Almaco Jack, Longsnout Butterflyfish, Four-eye Butterflyfish, Spotfin Butterflyfish, Banded Butterflyfish, Redspotted Hawkfish, Flying Gurnard, Atlantic Spadefish, Neon Goby, Rusty Goby, Royal Gramma, Porkfish, Margate, Tomtate, French Grunt, White Grunt, Bluestriped Grunt, Squirrelfish, Longspine Squirrelfish, Blackbar Soldierfish, Cardinal Soldierfish, Spanish Hogfish, Creole Wrasse, Yellowcheek Wrasse, Yellowhead Wrasse, Clown Wrasse, Puddingwife, Pearly Razorfish, Green Razorfish, Hogfish, Bluehead Wrasse, Black Snapper, Queen Snapper, Mutton Snapper, Schoolmaster, Blackfin Snapper, Gray Snapper, Dog Snapper, Mahogany Snapper, Lane Snapper, Silk Snapper, Yellowtail Snapper, Wenchman, Vermilion Snapper, Blackline Tilefish, Sand Tilefish, Yellow Goatfish, Spotted Goatfish, Chain Moray, Green Moray, Goldentail Moray, Batfish, Goldspotted Eel, Yellowhead Jawfish, Dusky Jawfish, Spotted Trunkfish, Honeycomb Cowfish, Scrawled Cowfish, Trunkfish, Smooth Trunkfish, Cherubfish, Queen Angelfish, Rock Beauty, Gray Angelfish, French Angelfish, Sergeant Major, Blue Chromis, Sunshinefish, Yellowtail Damselfish, Dusky Damselfish, Beaugregory, Bicolor Damselfish, Threespot Damselfish, Bigeye, Glasseye Snapper, Midnight Parrotfish, Blue Parrotfish, Striped Parrotfish, Rainbow Parrotfish, Princess Parrotfish, Queen Parrotfish, Redband Parrotfish, Redtail Parrotfish, Redfin Parrotfish, Stoplight Parrotfish, High-hat, Jackknife-fish, Spotted Drum, Scorpionfishes, Rock Hind, Graysby, Yellowedge Grouper,**

**Coney, Red Hind, Red Grouper, Misty Grouper, Butter Hamlet, Swissguard Basslet, Yellowfin Grouper, Tiger Grouper, Creole-fish, Greater Soapfish, Orangeback Bass, Lantern Bass, Tobaccodfish, Harlequin Bass, Chalk Bass, Caribbean Tonguefish, Sea Bream, Jolthead Porgy, Sheepshead Porgy, Pluma, Seahorses, Pipefishes, Sand Diver, Sharpnose Puffer, Porcupinefish** - A reef fish stock or stock complex is overfished when it is below the level of 20% of the spawning stock biomass per recruit (SSBR) that would occur in the absence of fishing.

When a reef fish stock or stock complex is overfished, overfishing is defined as harvesting at a rate that is not consistent with a program that has been established to rebuild the stock or stock complex to the 20% SPR level.

When a reef fish stock or stock complex is not overfished, overfishing is defined as a harvesting rate that, if continued, would lead to a state of the stock or stock complex that would not at least allow a harvest of OY on a continuing basis.

#### Queen Conch Resources of Puerto Rico and the U.S. Virgin Islands

**Queen Conch** - A queen conch stock is overfished when it is below the level of 20% of the spawning stock biomass per recruit (SSBR) that would occur in the absence of fishing.

When a queen conch stock is overfished, overfishing is defined as harvesting at a rate that is not consistent with a program that has been established to rebuild the stock to the 20% SSBR level.

When a queen conch stock is not overfished, overfishing is defined as a harvesting rate that, if continued, would lead to a state of the stock or stock complex that would not at least allow a harvest of OY on a continuing basis.

**Atlantic Triton's Trumpet, Cameo Helmet, Caribbean Helmet, Caribbean Vase, Flame Helmet, Green Star Shell, Hawkwing Conch, Milk Conch, Roostertail Conch, True Tulip, West Indian Fighting Conch, Whelk (West Indian Top Shell)** - No overfishing definition exists in the FMP.

#### Corals and Reef Associated Invertebrates of Puerto Rico and the U.S. Virgin Islands

**Sponges, Hydrocorals, Hydroids, Soft Corals, Gorgonian Corals, Hard Corals, Black Corals, Anemones, Colonial Anemones, False Corals, Annelid Worms, other Gastropods, Bivalves, Cephalopods, Crustaceans, Bryozoans, Feather Stars, Sea Stars, Brittle and Basket Stars, Sea Urchins, Sea Cucumbers, Tunicates, Green Algae, Red Algae, Seagrasses** Overfishing is defined as an annual level of harvest that exceeds OY. OY for stony corals, octocorals, live-rock and seagrasses is set at zero, except as may be authorized for scientific research, education and restoration purposes.

#### Washington, Oregon, and California Salmon

**Chum Salmon, Chinook Salmon (Columbia River, upriver Summer), Chinook Salmon (Columbia River, upriver Spring), Chinook Salmon (Columbia River, Snake River, Spring), Chinook Salmon (Skagit River, Spring), Chinook Salmon (Skagit River, Summer / Fall), Chinook Salmon (Stillaguamish River, Summer / Fall), Chinook Salmon (Snohomish River, Summer / Fall), Chinook Salmon (Lake Washington), Chinook Salmon (Dungeness River), Coho Salmon (Strait of Juan de Fuca), other Chinook Salmon stocks, other Coho Salmon stocks, Pink Salmon, Sockeye Salmon** - Overfishing is an occurrence whereby all mortality, regardless of the source, results in a failure of a salmon stock to meet its annual spawning escapement goal or management objective, as specified in Section 3.5 of the salmon FMP for 3 consecutive years, and for which changes in the fishery management regime offer the primary opportunity to improve stock status. While this condition is defined as overfishing in the broad sense, it is recognized that this situation may also be the result of nonfishing mortality and fishery management actions may not adequately address the situation.

When a specific stock or stock grouping fails to meet its annual spawning escapement objective for 3 consecutive years, the Council shall appoint a work group to investigate the causes of the apparent shortfall (e.g., due to causes within or outside of Council control). The current status of stock productivity and all sources of stock mortality will be examined by the work group and a report of its conclusions and recommendations provided to the Council. For those actions within Council control, the Council may change analytical or procedural methodologies to improve the accuracy of estimates for abundance, harvest impact and MSY escapement levels, and/or to reduce ocean harvest impacts when shown to be effective in stock recovery to MSY levels.

Stocks without specified goals in the FMP are also provided significant protection against overfishing because the Council bases its management on the stock which is first reduced to its annual specified goal level by the fisheries. Such a stock could be the weakest stock or an abundant stock which is heavily impacted by ocean salmon fisheries.

**Northern Anchovy** - No harvest of any kind when the spawning biomass during the current and preceding season was less than 50,000 mt. Harvests are resumed only when the spawning biomass equals or exceeds 50,000 mt.

## Washington, Oregon, and California Groundfish

**Lingcod, Canary Rockfish, Pacific Ocean Perch, Shortspine Thornyhead, Bocaccio, Yellowtail Rockfish, Pacific Whiting, Sablefish, Dover Sole, English Sole, Petrale Sole, Chilipepper Rockfish, Shortbelly Rockfish, Longspine Thornyhead, Widow Rockfish, Jack Mackerel, Pacific Cod, Arrowtooth Flounder, Butter Sole, Curlfin Sole, Flathead Sole, Pacific Sanddab, Rex Sole, Rock Sole, Sand Sole, Starry Flounder, Aurora Rockfish, Bank Rockfish, Black Rockfish, Black-and-Yellow Rockfish, Blackgill Rockfish, Blue Rockfish, Bronzespotted Rockfish, Brown Rockfish,**

**Calico Rockfish, China Rockfish, Copper Rockfish, Darkblotched Rockfish, Dusty Rockfish, Flag Rockfish, Gopher Rockfish, Grass Rockfish, Greenblotched Rockfish, Greenspotted Rockfish, Greenstriped Rockfish, Harlequin Rockfish, Honeycomb Rockfish, Kelp Rockfish, Mexican Rockfish, Olive Rockfish, Pink Rockfish, Quillback Rockfish, Redbanded Rockfish, Redstripe Rockfish, Rosethorn Rockfish, Rosy Rockfish, Rougheyeye Rockfish, Sharpchin Rockfish, Shortraker Rockfish, Silvergray Rockfish, Speckled Rockfish, Splitnose Rockfish, Squarespot Rockfish, Starry Rockfish, Stripetail Rockfish, Tiger Rockfish, Vermilion Rockfish, Yelloweye Rockfish, Yellowmouth Rockfish, Leopard Shark, Soupfin Shark, Spiny Dogfish, Big Skate, California Skate, Longnose Skate, Ratfish, Fingerling Codling, Pacific Rattail, Cabezon, Kelp Greenling, California Scorpionfish, Cowcod, Treefish** - Overfishing is defined as exceeding the fishing mortality rate ( $F_{OF}$ ) that would, in the long term, reduce spawning biomass per recruit to 20% of its unfished level.

When spawning biomass is greater than that which produces MSY, set  $F_{OF}$  equal to the greater of  $F_{20\%}$  and the rate that would, in 1 year, reduce the spawning biomass to the level that produces MSY.

Overfishing parameters to be compared to the standards cannot be estimated for all species because of the wide range of knowledge available for the species managed under the FMP. Three categories of species are identified. The first includes the few species for which a quantitative stock assessment can be conducted on the basis of a catch-at-age or other data. The second category includes a large number of species for which some biological indicators are available, but a quantitative analysis cannot be completed. The third category includes minor species that are caught, but for which there is, at best, only partial information on landed biomass.

## Crustaceans of the Western Pacific

**Spiny Lobster** - Lobster stocks shall be deemed overfished with regard to recruitment when the spawning potential ratio (measured for a specific area) is 0.2 or below.

**Slipper Lobster** - Lobster stocks shall be deemed overfished with regard to recruitment when the spawning potential ratio (measured for a specific area) is 0.2 or below.

## Precious Corals of the Western Pacific

**Pink Corals, Gold Corals, Bamboo Corals, Black Corals** - An established coral 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.

## Bottomfish and Seamount Groundfish of the Western Pacific

**Pelagic Armorhead, Squirrelfish Snapper (Main Hawaiian Islands), Longtail Snapper (Main Hawaiian Islands), Seabass (Main Hawaiian Islands), Squirrelfish Snapper (Northwest Hawaiian Islands), Longtail Snapper (Northwest Hawaiian Islands), Silverjaw Jobfish, Gray Jobfish, Bluestripe Snapper, Yellowtail Snapper, Pink Snapper, Yelloweye Snapper, Snapper *Pristipomoides sieboldii*, Snapper *Pristipomoides zonatus*, Giant Trevally, Black Jack, Thick Lipped Trevally, Amberjack, Blacktip Grouper, Seabass (Northwest Hawaiian Islands), Lunartail Grouper, Ambon Emperor, Redgill Emperor, Alfonsin, Ratfish** - A bottomfish species is recruitment overfished when the Spawning Potential Ratio (i.e., the ratio of the spawning stock biomass per recruit at the current level of fishing ( $SSBR_f$ ) to the spawning stock biomass per recruit that would occur in the absence of fishing ( $SSBR_u$ )), is equal to or less than .20.

## Pelagic Fisheries of the Western Pacific

**Yellowfin Tuna (Central Western Pacific), Albacore (South Pacific), Albacore (North Pacific), Yellowfin Tuna (Eastern Tropical Pacific), Skipjack Tuna (Central Western Pacific), Skipjack Tuna (Eastern Tropical Pacific), Striped Marlin, Black Marlin, Bigeye Tuna (Pacific), other Tuna relatives: *Auxis spp.*, *Scomber spp.*, *Allothunnus spp.*, Swordfish (Pacific), Sailfish (Pacific), Shortbill Spearfish (Pacific), Wahoo (Pacific), Mahimahi (Pacific), Blue Marlin (Pacific), Opah, Oilfish, Escolar** - A stock is overfished when its spawning potential ratio (SPR) is equal to or less than 0.20. SPR may be estimated in several ways, using estimates of spawning stock biomass, spawning stock biomass per recruit, spawning stock catch per unit of effort, and exploitable stock biomass. The common element for all calculations is the attempt to assess the status of current spawning potential against the spawning potential of an unfished

population. The use of a specific measure will depend on the availability of data for the stock and fisheries involved.

**Pelagic Sharks** - A stock is overfished when its spawning potential ratio (SPR) is equal to or less than 0.35. SPR may be estimated in several ways, using estimates of spawning stock biomass, spawning stock biomass per recruit, spawning stock catch per unit of effort, and exploitable stock biomass. The common element for all calculations is the attempt to assess the status of current spawning potential against the spawning potential of an unfished population. The use of a specific measure will depend on the availability of data for the stock and fisheries involved.

#### Gulf of Alaska Groundfish

**Walleye Pollock, Pacific Cod, Sablefish, Atka Mackerel, Thornyhead Rockfish, Dusky Rockfish, Dover Sole, Flathead Sole, Rex Sole, Arrowtooth Flounder, Pacific Ocean Perch, Shortraker Rockfish, Rougheye Rockfish, Sculpins, Sharks, Skates, Eulachon, Smelts, Capelin, Rock Sole, Rattail, Squid, Octopus, Greenland Turbot, Black Rockfish, Blue Rockfish, Widow Rockfish, Yellowtail Rockfish, Canary Rockfish, China Rockfish, Copper Rockfish, Quillback Rockfish, Rosethorn Rockfish, Tiger Rockfish, Yelloweye Rockfish, Aurora Rockfish, Blackgill Rockfish, Bocaccio Rockfish, Chilipepper Rockfish, Darkblotch Rockfish, Greenstriped Rockfish, Harlequin Rockfish, Pygmy Rockfish, Redbanded Rockfish, Redstripe Rockfish, Sharpchin Rockfish, Shortbelly Rockfish, Silvergray Rockfish, Splitnose Rockfish, Stripetail Rockfish, Vermilion Rockfish, Yellowmouth Rockfish** - Overfishing is defined as any amount of fishing in excess of a prescribed maximum allowable rate. This maximum allowable rate is prescribed through a set of six tiers [which are listed in Appendix 4] in descending order of preference, corresponding to descending order of information availability. The SSC will have final authority for determining whether a given item of information is "reliable" for the purpose of this definition, and may use either objective or subjective criteria in making such determinations. For tier (1), a "pdf" refers to a probability density function. For tiers (1-3), the coefficient is set at a default value of 0.05, with the understanding that the SSC may establish a different value for a specific stock of stock complex as merited by the best available scientific information. For tiers (2-4), a designation of the form " $F_{X\%}$ " refers to the F associated with an equilibrium level of spawning per recruit (SPR) equal to X% of the equilibrium level of spawning per recruit in the absence of any fishing. If reliable information sufficient to characterize the entire maturity schedule of a species is not available, the SSC may choose to view SPR calculations based on a knife-edge maturity assumption as reliable. For tier (3), the term  $B_{40\%}$  refers to the long-term average biomass that would be expected under average recruitment and  $F=F_{40\%}$ .

#### Alaska Salmon

**Pink Salmon, Sockeye Salmon, Chum Salmon, Coho Salmon, Chinook Salmon** - Overfishing is defined as any fishing that results in the stock not meeting spawner escapement targets. Escapement targets are set by Alaska Department of Fish and Game and the U.S.-Canada Pacific Salmon Commission so that escapement will not be significantly less than needed to produce MSY. Escapement targets for major stocks of Alaska salmon are continuously evaluated based on new data and improved spawner-recruit databases. The overfishing definition notwithstanding, it is recognized that failure to meet spawner escapements may also be the result of nonfishing mortality and that fishery management actions may not adequately address the situation.

#### Bering Sea / Aleutian Islands Groundfish

**Walleye Pollock, Pacific Cod, Yellowfin Sole, Greenland Turbot, Arrowtooth Flounder, Rock Sole, Flathead Sole, Sablefish, Pacific Ocean Perch, Sharpchin / Northern Rockfish, Shortraker / Rougheye Rockfish, Atka Mackerel, Squid, Alaska Plaice, Rex Sole, Butter Sole, Longhead Dab, Dover Sole, Starry Flounder, Rattails, Shortspine Thornyhead, Sculpins, Sharks, Skates, Eulachon, Smelts, Capelin, Octopus, Dusky Rockfish, Darkblotched Rockfish, Yelloweye Rockfish, Blue Rockfish** - Overfishing is defined as any amount of fishing in excess of a prescribed maximum allowable rate. This maximum allowable rate is prescribed through a set of six tiers [which are listed in Appendix 4] in descending order of preference, corresponding to descending order of information availability. The SSC will have final authority for determining whether a given item of information is "reliable" for the purpose of this definition, and may use either objective or subjective criteria in making such determinations. For tier (1), a "pdf" refers to a probability density function. For tiers (1-3), the coefficient is set at a default value of 0.05, with the understanding that the SSC may establish a different value for a specific stock of stock complex as merited by the best available scientific information. For tiers (2-4), a designation of the form " $F_{X\%}$ " refers to the F associated with an equilibrium level of spawning per recruit (SPR) equal to X% of the equilibrium level of spawning per recruit in the absence of any fishing. If reliable information sufficient to characterize the entire maturity schedule of a species is not available, the SSC may choose to view SPR calculations based on a knife-edge maturity assumption as reliable. For tier (3), the term  $B_{40\%}$  refers to the long-term average biomass that would be expected under average recruitment and  $F=F_{40\%}$ .

#### Bering Sea / Aleutian Islands King and Tanner Crabs

**Blue King Crab (Pribilof Islands, Saint Matthew Island, Saint Lawrence Island), Brown King Crab (Aleutians, Pribilof**

**Islands, Northern District), Red King Crab (Bristol Bay, Norton Sound, Pribilof Islands, Aleutians), Bering Sea Snow Crab, Tanner Crab [Bering Sea, Eastern Aleutians, Adak (Western Aleutians)]** - Overfishing is defined as any rate of fishing mortality in excess of  $F_{msy}$  for king and Tanner crab stocks in the Bering Sea and Aleutian Islands (BSAI) management area. Three tiers are characterized for this definition according to the data available to quantify maximum fishing mortality rate. Each of the 17 stocks in the management area is assigned to one of the tiers.

- Tier 1) Data available: Historical catch, sporadic inseason catch and effort data, and mortality. Overfishing for stocks with tier 1 data is defined as a fishing mortality rate in excess of  $F_{msy}$ , where the maximum allowable fishing mortality rate is estimated to equal the natural mortality rate of mature male crab. Inseason fishing mortality rate may be based on a change in the inseason ratio of CPUE of legal to mature male crab or a proportionate reduction in average weekly CPUE.
- Tier 2) Data available: Historical catch, continuous inseason catch and effort data, and mortality. Overfishing for stocks with tier 2 data is defined as a fishing mortality rate in excess of  $F_{MSY}$ , where the maximum allowable fishing mortality rate is estimated to equal the natural mortality rate of mature male crab. Inseason fishing mortality rate may be based on inseason CPUE and cumulative catch or legal male crab.
- Tier 3) Data available: Historical catch, continuous inseason catch and effort data, stock assessment, stock-recruitment, growth, maturity, and mortality parameters. Overfishing for stocks with tier 3 data is defined as a fishing mortality rate in excess of  $F_{MSY}$ , where the maximum allowable fishing mortality rate for these stocks cannot exceed  $F_{MSY}$  estimated as  $F_{0.1}$ , based on the size of first maturity for male crabs. Guideline harvest levels are estimated annually for tier 3 stocks, therefore the fishing mortality rate is established prior to a fishery.

Alaska Scallops - Overfishing is defined as landings that exceed the optimum yield (OY) specified for the scallop fishery. The long-term OY for the scallop resource in Federal waters off Alaska (all species) is specified as a numerical range. In the absence of biomass estimates needed to implement an exploitation rate harvest strategy, the OY is specified as the long-term productivity. The OY range is zero to 1.8 million lbs (814 mt) of shucked scallop meats, and is derived from

historical catches from State and Federal waters off Alaska. The low end of the range is the lowest catch on record (zero pounds in 1978). The high end of the OY approximates the highest catch taken from the waters off Alaska since the "fishing up" period (1.8 million pounds in 1993). While the FMP covers harvests of all scallop species appearing in Alaska, only weathervane scallops *Patinopecten caurinus* have been harvested commercially in Federal waters off Alaska since the emergence of the fishery in the late 1960s.

Atlantic Swordfish - No overfishing definition exists in the FMP.

Atlantic Billfishes

**Blue Marlin (North Atlantic)** - No overfishing definition exists in the FMP.

**White Marlin (North Atlantic)** - No overfishing definition exists in the FMP.

**Sailfish (West Atlantic)** - No overfishing definition exists in the FMP.

**Spearfish (West Atlantic)** - No overfishing definition exists in the FMP.

Atlantic Sharks

**Sandbar Shark, Blacktip Shark, Dusky Shark, Spinner Shark, Silky Shark, Bull Shark, Bignose Shark, Narrowtooth Shark, Galapagos Shark, Night Shark, Caribbean Reef Shark, Tiger Shark, Lemon Shark, Sand Tiger Shark, Bigeye Sand Tiger Shark, Nurse Shark, Scalloped Hammerhead Shark, Great Hammerhead Shark, Smooth Hammerhead Shark, Whale Shark, Basking Shark, White Shark, Atlantic Sharpnose Shark, Caribbean Sharpnose Shark, Finetooth Shark, Blacknose Shark, Smalltail Shark, Bonnethead Shark, Atlantic Angel Shark, Shortfin Mako Shark, Longfin Mako Shark, Porbeagle Shark, Thresher Shark, Bigeye Thresher Shark, Blue Shark, Oceanic Whitetip Shark, Sevengill Shark, Sixgill Shark, Bigeye Sixgill Shark -**

1. When a stock size is at a level that is determined, based on the best scientific information available, to be sufficient to produce MSY on a continuing basis, overfishing is defined as a fishing mortality rate (F) that exceeds the fishing mortality rate that would produce MSY on a continuing basis ( $F_{MSY}$ ).

2. When the stock size is below the level that is determined, based on the best scientific information available, to be sufficient to produce MSY on a continuing basis, overfishing is defined as a fishing mortality rate that exceeds the rate that is consistent with a rebuilding program established under the FMP.

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## Appendix 2. Overfishing Definitions for Species not Contained in Federal Fishery Management Plans

Pacific Halibut - A rate of fishing that exceeds the constant exploitation yield. The constant exploitation yield is computed using a harvest rate of 0.20 of the exploitable biomass (8-year+ Pacific halibut).

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## Appendix 3. Overfishing Definitions from Fishery Management Plans Under Development

See Appendix 5 for definitions of acronyms used in this appendix.

Atlantic Herring - Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP. This definition is contained in the Atlantic States Marine Fisheries Commission's Atlantic Herring FMP. There is currently no Federal FMP for Atlantic herring.

Monkfish - Monkfish in the northern and southern management areas are defined as being overfished when the 3-year moving average autumn survey weight per tow falls below the 33rd percentile of the time series for 1963-1994, or when the 3-year moving average autumn survey weight per tow falls below the median of the 3-year moving average during the period 1965-1981 and when fishing mortality is between  $F_{\text{target}}$  and  $F_{\text{threshold}}$ . This definition has been adopted by the New England Fishery Management Council and has been certified by the National Marine Fisheries Service as an acceptable overfishing definition. There is currently no Federal FMP for monkfish.

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## Appendix 4. Six Tiers comprising the Overfishing Definition for Gulf of Alaska and Bering Sea/Aleutian Islands Groundfish

See Appendix 5 for definitions of acronyms used in this appendix.

### 1) Information available: Reliable point estimates of B and $B_{\text{MSY}}$ and reliable pdf of $F_{\text{MSY}}$ .

a. Stock status:  $B/B_{\text{MSY}} > 1$

$F_{\text{OFL}} = A$ , the arithmetic mean of the pdf

$F_{\text{ABC H}}$ , the harmonic mean of the pdf

b. Stock status:  $B/B_{\text{MSY}} < 1$

$F_{\text{OFL}} = A \times (B/B_{\text{MSY}} - 1) / (1 - 1)$

$F_{\text{ABC H}} \times (B/B_{\text{MSY}} - 1) / (1 - 1)$

1c) Stock status:  $B/B_{\text{MSY}}$

$F_{\text{OFL}} = 0$

$F_{\text{ABC}} = 0$

### 2) Information available: Reliable point estimates of B, $B_{\text{MSY}}$ , $F_{\text{MSY}}$ , $F_{30\%}$ , and $F_{40\%}$ .

a. Stock status:  $B/B_{\text{MSY}} > 1$

$F_{\text{OFL}} = F_{\text{MSY}} \times (F_{30\%} / F_{40\%})$

$F_{\text{ABC}} = F_{\text{MSY}}$

**b.** Stock status:  $B/B_{MSY} < 1$

$$F_{OFL} = F_{MSY} \times (F_{30\%} / F_{40\%}) \times (B/B_{MSY} - 1) / (1 - F_{30\%})$$

$$F_{ABC} = F_{MSY} \times (B/B_{MSY} - 1) / (1 - F_{30\%})$$

**c.** Stock status:  $B/B_{MSY} \geq 1$

$$F_{OFL} = 0$$

$$F_{ABC} = 0$$

**3) Information available: Reliable point estimates of  $B$ ,  $B_{40\%}$ ,  $F_{30\%}$ , and  $F_{40\%}$ .**

**a.** Stock status:  $B/B_{40\%} > 1$

$$F_{OFL} = F_{30\%}$$

$$F_{ABC} = F_{40\%}$$

**b.** Stock status:  $B/B_{40\%} < 1$

$$F_{OFL} = F_{30\%} \times (B/B_{40\%} - 1) / (1 - F_{30\%})$$

$$F_{ABC} = F_{40\%} \times (B/B_{40\%} - 1) / (1 - F_{30\%})$$

**c.** Stock status:  $B/B_{40\%} \geq 1$

$$F_{OFL} = 0$$

$$F_{ABC} = 0$$

**4) Information available: Reliable point estimates of  $B$ ,  $F_{30\%}$ , and  $F_{40\%}$ .**

$$F_{OFL} = F_{30\%}$$

$$F_{ABC} = F_{40\%}$$

**5) Information available: Reliable point estimates of  $B$  and natural mortality rate  $M$ .**

$$F_{OFL} = M$$

$$F_{ABC} = 0.75 \times M$$

**6) Information available: Reliable catch history from 1978 through 1995.**

OFL = the average catch from 1978 through 1995, unless an alternative value is established by the SSC on the basis of the best available scientific information.

$$F_{ABC} = 0.75 \times OFL$$

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**Appendix 5. Acronyms used in Appendices**

- The ratio between two stock sizes: (1) the stock size below which the fishery must be closed and (2) the long-term average stock size that would be expected to be achieved in the absence of fishing in the Gulf of Alaska and Bering Sea (Aleutian Islands Groundfish FMP).

size that would be expected in the absence of fishing. In the Gulf of Alaska and Bering Sea/Aleutian Islands Groundfish FMPs, it is typically equal to 0.05.

ABC - Allowable Biological Catch - A term that refers to the range of allowable catch for a species or species group. It is set each year by a scientific group. The ABC estimates are used to set the annual total allowable catch (TAC).

ASMFC - Atlantic States Marine Fisheries Commission - Serves as a deliberative body of the Atlantic coastal states, coordinating the conservation and management of nearshore fishery resources, including marine, shell, and anadromous species.

B - The weight (biomass) of a group of fish.

B<sub>MSY</sub> - The average stock size that would be expected if the fishing mortality rate were held equal to  $F_{MSY}$  for a long time.

CFMC - Caribbean Fishery Management Council.

CPUE - Catch Per Unit of Effort - The number of fish caught by an amount of effort. Typically, effort is a combination of gear type, gear size, and length of time gear is used. Catch per unit of effort is often used as a measurement of relative abundance.

EEZ - Exclusive Economic Zone - All waters from the seaward boundary of coastal states out to 200 nautical miles.

EPR - Eggs-Per-Recruit - The average number of eggs produced by an individual fish that has been recruited, i.e., that moved into a certain class, such as the spawning class or fishing-size class. Used as an index of abundance.

E - Fishing Mortality Rate - The proportion of the stock that is removed (per unit of time) by the fishery. The fishing mortality rate may be expressed in either discrete or instantaneous terms (an instantaneous fishing mortality rate is analogous to continuous compounding of interest).

E<sub>ABC</sub> - The level of fishing mortality that results in the allowable biological catch.

E<sub>MAX</sub> - The fishing mortality rate that maximizes lifetime yield from a cohort.

E<sub>MSY</sub> - The fishing mortality rate that maximizes long-term average yield from a stock.

E<sub>OF</sub> - The level of fishing mortality defined as overfishing.

E<sub>OFL</sub> - The fishing mortality rate above which overfishing is defined to occur (see  $F_{OF}$ ).

E<sub>20%</sub> - The level of fishing mortality that results in a spawning potential ratio of 20% of the maximum.

E<sub>25%</sub> - The level of fishing mortality that results in a spawning potential ratio of 25% of the maximum.

E<sub>30%</sub> - The level of fishing mortality that results in a spawning potential ratio of 30% of the maximum.

E<sub>40%</sub> - The level of fishing mortality that results in a spawning potential ratio of 40% of the maximum.

E<sub>0.1</sub> - The fishing mortality rate where an additional unit of effort provides a catch equal to one-tenth of the CPUE that would be observed if stock size were at its pristine level (i.e., the highest possible CPUE).

FMP - Fishery Management Plan - A plan to achieve specified management goals for a fishery prepared under the authority of the Magnuson-Stevens Fishery Conservation and Management Act.

GMFMC - Gulf of Mexico Fishery Management Council.

GSMFC - Gulf States Marine Fisheries Commission - Serves as a deliberative body of the Gulf of Mexico coastal states, coordinating the conservation and management of nearshore fishery resources, including marine, shell, and anadromous species.

HMS - Highly Migratory Species Division - Develops fishery policies designed to manage any highly migratory species (tuna species, marlin, oceanic sharks, sailfishes, and swordfish) fishery that is within the geographical authority of more than one Council.

MAFMC - Middle-Atlantic Fishery Management Council.

MSP - Maximum Spawning Potential - See SPR.

MSY - Maximum Sustainable Yield - The largest long-term average catch or yield that can be taken from a stock or stock complex under prevailing ecological and environmental conditions.

NEFMC - New England Fishery Management Council.

NPFMC - North Pacific Fishery Management Council.

OY - Optimum Yield - The amount of fish that: (1) 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; (2) is prescribed on the basis of the MSY from the fishery, as reduced by any relevant economic, social, or ecological factors; (3) in the case of an overfished fishery, provides for rebuilding to a level consistent with producing the MSY in such fishery.

PDF - Probability Density Function - A description of the probability that a variable takes a specified value.

PFMC - Pacific Fishery Management Council.

SAFE - Stock Assessment and Fishery Evaluation - A document or set of documents that provides Councils with a summary of the most recent biological condition of species in the fishery management unit, and the social and economic condition of the recreational and commercial fishing interests and the fish processing industries. It summarizes, on a periodic basis, the best available scientific information concerning the past, present, and possible future condition of the stocks and fisheries being managed under Federal regulation.

SAFMC - South Atlantic Fishery Management Council.

SPR - Spawning Potential Ratio - The number of eggs that could be produced by an average recruit in a fished stock, divided by the number of eggs that could be produced by an average recruit in an unfished stock. SPR can also be expressed as the spawning stock biomass per recruit (SSBR) of a fished stock divided by the SSBR of the stock before it was fished.

SSB - Spawning Stock Biomass - The total weight of the fish in a stock that are old enough to spawn.

SSBR - Spawning Stock Biomass Per Recruit - The spawning stock biomass divided by the number of recruits to the stock, or how much spawning biomass an average recruit would be expected to produce.

SSC - Scientific and Statistical Advisory Committee - A group of scientific and technical people giving advice to a council.

WPFMC - Western Pacific Fishery Management Council.

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