# **REPORT TO CONGRESS**

# STATUS OF FISHERIES OF THE UNITED STATES

# PREPARED BY NATIONAL MARINE FISHERIES SERVICE

**OCTOBER 1999** 

### Report on the Status of Fisheries of the United States

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#### Report on Status of Fisheries and Identification of Overfished Stocks

#### **Executive Summary**

The Sustainable Fisheries Act [SFA (Public Law 104-297)], which reauthorized and amended 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.

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. Many of the new definitions contained in FMPs have been submitted and approved consistent with the new National Standard Guidelines, and additional stocks have been identified as overfished under the new definitions.

Based on the criteria specified in the Magnuson-Stevens Act, the Report on the Status of Fisheries finds that 98 species are listed as "overfished," 127 species are listed as "not overfished," and 5 species are considered to be "approaching an overfished condition"; for 674 species, the status relative to "overfished" is "unknown." Whenever possible, species were assessed using existing overfishing definitions in FMPs or FMPs under development; the remainder were evaluated using the most recent (1999) edition of <u>Our Living Oceans</u>.

Last year's report identified 90 species as "overfished," 200 species as "not overfished," and 10 species as "approaching an overfished condition"; for 544 species, the status relative to overfishing was "unknown."

#### 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) third annual report to Congress and the Councils in compliance with section 304(e)(1).

#### **Listing of Species**

For all species identified in this report, a substantial portion of the stock occurs within the EEZ; stocks that do not have a substantial portion occurring in the EEZ are not included. Species contained within a management unit identified in an FMP are listed in Table A1. Species that are not contained in an FMP are listed in Table A2. Species contained in an FMP under development are listed in Table A3.

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.

#### 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). Prior to requirements under the new National Standard Guidelines, most existing overfishing definitions were based wholly or in part on either a fishing mortality rate or stock biomass, but not both. The new statutory definition requires that status determination criteria must specify both a maximum fishing mortality threshold or reasonable proxy, and a minimum stock size threshold or reasonable proxy. Thus, species must be assessed according to whether the fishing mortality threshold is being exceeded and whether the minimum stock size threshold is being met. "Overfishing" occurs for those species for which the fishing mortality rate exceeds the threshold fishing mortality rate or level required to produce the maximum sustainable yield (MSY) on a continuing basis. "Overfished" species are those for which the stock size falls below the minimum stock size required to produce MSY on a continuing basis. In the table, the term "overfished" can apply to either conditions where "overfishing" is occurring, or where the stock is "overfished," or both.

This year's report, in conformance with SFA requirements, identifies the status determination of species based on both the fishing mortality rate and stock biomass, wherever possible. The National Standard Guidelines require NMFS to determine whether the fishing mortality rate is being exceeded or the biomass is below the established threshold for each species. The following

is a description of the basis for the "overfished" or status determination under a variety of scenarios associated with fully approved, partially approved, or fully disapproved definitions.

<u>Fully Approved Definitions under the SFA</u>: For those species contained in FMPs for which overfishing definitions were fully approved, status determinations were based on assessments using both the fishing mortality rate and biomass definitions, wherever possible. If either the fishing mortality rate exceeded the established threshold or the biomass was below the established threshold, the species was classified as "overfished." Species listed as "unknown" are those for which there is an approved overfishing definition, but for which no determination can be made relative to that definition because of insufficient information.

Partially Approved Definitions under the SFA: For those species contained in FMPs for which overfishing definitions were partially approved (i.e., for which only one of the two necessary criteria was approved), the disapproved criterion was assessed as "undefined." Species listed as "undefined" are those for which there is no status criterion by which to make a determination. If the approved portion of the definition was listed as "overfished," the determination in the "overfished" column was assessed as "overfished." If the approved portion of the definition was assessed as "not overfished," the determination in the "overfished" column was assessed as "unknown," because the status of the species is uncertain under SFA guidelines if one of the status criteria is not present.

<u>Definitions under the SFA that are Fully Disapproved or Still Under Review</u>: For those species contained in FMPs for which the overfishing definitions were disapproved or are still under review, status determinations were based on previously existing definitions, and were assessed under pre-SFA guidelines. The overfishing determination was based solely on the status criterion that is available. The status criterion that is not available is listed as "undefined."

Assessment Based on Previous Definitions Despite Fully Approved New Definitions under the SFA: There are some species for which status determinations were made relative to previously existing approved definitions, even though new overfishing definitions have been approved for these species. For these species, peer-reviewed assessments under the new overfishing definitions were not available for this year's report.

In assessing whether species were "approaching an overfished condition," no distinction was made between "overfished" and "overfishing." These species were assessed based on whether "overfishing" is likely to occur in the next 2 years, or whether the fishery is likely to become "overfished" in the next 2 years.

For all species for which there is an approved overfishing definition contained in an FMP or an overfishing definition contained in an FMP under development, the status of the stock relative to the FMP definition was used to determine the status of the species and whether it is approaching an overfished condition. The 1999 edition of <u>Our Living Oceans</u> (OLO) was used to determine the status relative to overfishing for 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. In OLO, the terms "overfished" and "overfishing" are not used, but similar concepts are. Long Term Potential Yield (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 definition of "overfished." Species that are listed in OLO as "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." In determining whether "overfishing" is occurring, the existing fishing effort or fishery utilization level is compared to the level necessary to achieve LTPY. Species that are listed in OLO as "over" are species for which "overfishing" is occurring, and those that are listed as "under" or "fully" are species for which "no overfishing" is occurring. 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."

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

#### **Results**

Using the methodology described above to assess the status of the fisheries, there are currently 98 species classified as "overfished," 127 species classified as "not overfished," 5 species that are "approaching an overfished condition," and 674 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.

A total of 60 additional species have been added to this year's report. Many of these are new species that have been added to the management unit contained in an FMP, while others are species that have been broken out into two or more stocks and are addressed separately.

The following table provides a breakdown of the assessed species:

Jurisdiction	Year	Number of Stocks under Council's Geographical Area	Overfished	Not Overfished	Approaching Overfished Condition	
NEFMC	1997	26	12	7	2	5
	1998	26	12	7	2	5
	1999	29	16	9	0	4
MAFMC	1997	11	5	6	0	0
	1998	11	5	6	0	0
	1999	11	6	5	0	0
NEFMC/MAFMC	1997	9	1	1	0	7
	1998	9	2	0	0	7
	1999	9	2	0	0	7
SAFMC	1997	84	14	5	0	65
	1998	84	17	11	0	56
	1999	86	15	0	0	71
GMFMC	1997	69	4	6	1	58
	1998	61	4	6	2	49
	1999	61	4	6	2	49
SAFMC/GMFMC	1997	10	1	5	0	4
	1998	10	1	5	0	4
	1999	10	1	0	0	9
CFMC	1997	179	3	1	0	175
	1998	179	3	1	0	175
	1999	179	3	1	0	175
PFMC	1997	109	13	16	6	74
	1998	109	12	17	5	75
	1999	109	16	17	1	75

Jurisdiction	Year	Number of Stocks under Council's Geographical Area	Overfished	Not Overfished	Approaching Overfished Condition	Unknown
WPFMC	1997	64	3	47	1	13
	1998	66	3	47	1	15
	1999	64	1	47	1	15
NPFMC	1997	105	0	63	0	42
	1998	229	0	75	0	154
	1999	252	3	30	0	219
PFMC/NPFMC	1997	1	0	1	0	0
	1998	1	0	1	0	0
	1999	1	0	1	0	0
HMS	1997	50	26	21	0	3
	1998	50	28	20	0	2
	1999	84	29	8	0	47
ASMFC	1997	8	4	3	0	1
	1998	7	3	3	0	1
	1999	7	2	2	1	2
GSMFC	1997	2	0	1	0	1
	1998	2	0	1	0	1
	1999	2	0	1	0	1
Total	1997	727	86	183	10	448
	1998	844	90	200	10	544
	1999	904	98	127	5	674

#### Conclusion

Last year's report identified 90 species as "overfished," 200 species as "not overfished," and 10 species as "approaching an overfished condition"; for 544 species, the status relative to overfishing was "unknown." Because Witch Flounder, Winter Flounder (Gulf of Maine), Winter Flounder (Southern New England), Wreckfish (South Atlantic), Gray Triggerfish (South Atlantic), Pacific (Chub) Mackerel, Pacific Sardine, Squirrelfish Snapper (Main Hawaiian Islands), Longtail Snapper (Main Hawaiian Islands), and Spotted Seatrout have been removed from the list

of species that are "overfished," the Councils are no longer required to take measures to end overfishing for these species. For Witch Flounder, Winter Flounder (Gulf of Maine), Winter Flounder (Southern New England), Wreckfish (South Atlantic), and Gray Triggerfish (South Atlantic), the most recent assessments based on the current overfishing definitions support removing them from the "overfished" list. Previously, Pacific (Chub) Mackerel and Pacific Sardine were assessed using OLO. They are now contained in the Coastal Pelagics Species FMP, and were assessed using the current overfishing definition. Squirrelfish Snapper (Main Hawaiian Islands) and Longtail Snapper (Main Hawaiian Islands) were previously considered separate stocks from Squirrelfish Snapper (Northwest Hawaiian Islands) and Longtail Snapper (Northwest Hawaiian Islands), but upon review, the Main and Northwest Hawaiian Islands "stocks" have now been combined into one stock. For Spotted Seatrout, the status determination in the most recent edition of OLO has assessed the species as "unknown."

Rebuilding programs have been submitted for 65 of these stocks, 48 of which have been approved, 11 of which have been disapproved, and 6 of which are under review. In some cases, it was determined that existing rebuilding programs met the requirements of the SFA, and no additional management measures were required. Should the Councils determine that those management measures need to be changed, additional amendments would have to be submitted for approval to insure that they continue to meet the requirements of the Act.

The majority of stocks (75%) identified in this report were assessed as "unknown" in terms of their status relative to overfishing; there are 649 stocks that are contained in FMPs whose status is "unknown" and 25 stocks not contained in FMPs whose status is "unknown." Some of these species were previously assessed as "not overfished," and have now been assessed as "unknown." For these species, status determinations were based on a partially approved overfishing definition that does not contain both a fishing mortality rate and biomass criteria. If the approved portion of the definition was assessed as "not overfished," the determination in the "overfished" column was assessed as "unknown," because the status of the species is uncertain under SFA guidelines if one of the status criteria is not present. 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.

This year's report identifies 18 additional species (Georges Bank Cod; Gulf of Maine Haddock; Cape Cod Yellowtail Flounder; White Hake; Georges Bank Winter Flounder; Gulf of Maine / Northern Georges Bank Silver Hake; Ocean Pout; Loligo Squid; WA, OR, CA Lingcod; WA, OR, CA Pacific Ocean Perch; WA, OR, CA Bocaccio; WA, OR, CA Bank Rockfish; WA, OR, CA Darkblotched Rockfish; WA, OR, CA Silvergrey Rockfish; Saint Mathew Island Blue King Crab; Bering Sea Snow Crab; Bering Sea Tanner Crab; North Atlantic Albacore ) that are "overfished," and 1 additional species (Northern Shrimp) that is "approaching an overfished condition." Ten species were listed as "approaching an overfished condition" in last year's report, and 5 of these species (White Hake; Gulf of Maine / Northern Georges Bank Silver Hake; WA, OR, CA Lingcod; WA, OR, CA Pacific Ocean Perch; and WA, OR, CA Bocaccio) are now listed as "overfished" and 1 species (Shortspine Thornyhead) is now listed as "not overfished" based on

recent assessments. The Councils and the Secretary may be required to submit measures to end overfishing and rebuild stocks that are "overfished," and to prevent overfishing for those stocks that are "approaching an overfished condition" managed under these FMPs and FMPs under development, within a year of being notified.

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

					Overfished	?	Approaching	Rebuilding
Fishery Management Plan		Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Atlantic Sea Scallop	Ati	lantic Sea Scallop	NEFMC	Yes	No	Yes	N/A	Yes
Atlantic Salmon	A	Atlantic Salmon	NEFMC	No	Yes	Yes	N/A	Yes
American Lobster	American Lobster		NEFMC	Yes	Undefined	Yes*	N/A	No
Northeast Multispecies	Cod	Gulf of Maine	NEFMC	Yes	Undefined	Yes*	N/A	Yes
		Georges Bank	NEFMC	Yes	Undefined	Yes*	N/A	Yes
Northeast Multispecies	Haddock	Georges Bank	NEFMC	No	Undefined	No*	Unknown	N/A
		Gulf of Maine	NEFMC	Yes	Yes	Yes	N/A	Yes
		Georges Bank	NEFMC	No	Undefined	No*	Unknown	N/A
Northeast Multispecies	Yellowtail	Southern New England	NEFMC	No	Undefined	No*	Unknown	N/A
	Flounder	Cape Cod	NEFMC	Yes	Yes	Yes	N/A	Yes
		Middle Atlantic	NEFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Northeast Multispecies	A	American Plaice	NEFMC	Yes	Yes	Yes	N/A	No
Northeast Multispecies	Redfish		NEFMC	No	Undefined	No*	Unknown	N/A
Northeast Multispecies	,	Witch Flounder	NEFMC	No	No	No	No	N/A

	Stock				Overfished	?	Approaching	Rebuilding Program?
Fishery Management Plan			Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	
Northeast Multispecies		White Hake	NEFMC	Yes	Yes	Yes	N/A	No
Northeast Multispecies		Pollock	NEFMC	Unknown	Undefined	Unknown*	Unknown	N/A
	Windowpane	Gulf of Maine / Georges Bank	NEFMC	Yes	No	Yes	N/A	No
Northeast Multispecies	Flounder	Southern New England / Middle Atlantic	NEFMC	No	No	No	No	N/A
	Winter	Georges Bank	NEFMC	Yes	Yes	Yes	N/A	No
Northeast Multispecies	Flounder	Gulf of Maine	NEFMC	Unknown	Undefined	Unknown*	Unknown	N/A
		Southern New England	NEFMC	No	No	No	No	N/A
Northeast Multispecies	Silver Hake	Gulf of Maine / Northern Georges Bank	NEFMC	Yes	No	Yes	N/A	Yes
		Southern Georges Bank / Middle Atlantic	NEFMC	Yes	Yes	Yes	N/A	Yes
Northeast Multispecies		Offshore Hake	NEFMC	Unknown	Unknown	Unknown	Unknown	N/A
Northeast Multispecies	Red	Southern Georges Bank / Middle Atlantic	NEFMC	Unknown	Yes	Yes	N/A	Yes
	Hake	Gulf of Maine / Northern Georges Bank	NEFMC	No	No	No	No	N/A
Northeast Multispecies		Ocean Pout	NEFMC	Undefined	Yes	Yes*	N/A	No
Northeast Multispecies		Atlantic Halibut		Yes	Yes	Yes	N/A	Yes
Monkfish		Monkfish	NEFMC / MAFMC	Yes	Yes	Yes	N/A	Yes

				Overfished	?	Approaching Overfished Condition?	Rebuilding Program?	
Fishery Management Plan	Stock		Jurisdiction	Fishing Mortality Rate	Biomass			Overfished?
Summer Flounder, Scup, and Black Sea Bass		Scup	MAFMC	Yes	Yes	Yes	N/A	No
Summer Flounder, Scup, and Black Sea Bass	S	ummer Flounder	MAFMC	Yes	Yes	Yes	N/A	Yes
Summer Flounder, Scup, and Black Sea Bass		Black Sea Bass	MAFMC	Yes	Yes	Yes	N/A	Yes
Atlantic Bluefish	Bluefish	(except Gulf of Mexico)	MAFMC	Yes	Yes	Yes	N/A	Yes
Atlantic Surf Clam and Ocean Quahog	Surf Clam		MAFMC	No	Undefined	No*	No	N/A
Atlantic Surf Clam and Ocean Quahog	Ocean Quahog		MAFMC	No	No	No	No	N/A
Atlantic Mackerel, Squid,	Squid	Illex	MAFMC	No	No	No	No	N/A
and Butterfish		Loligo	MAFMC	Yes	Yes	Yes	N/A	No
Atlantic Mackerel, Squid, and Butterfish	A	tlantic Mackerel	MAFMC	No	No	No	No	N/A
Atlantic Mackerel, Squid, and Butterfish	Bu	tterfish (Atlantic)	MAFMC	No	No	No	No	N/A
South Atlantic Golden Crab		Golden Crab	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Shrimp		White Shrimp	SAFMC	Undefined	No	Unknown**	No	N/A
South Atlantic Shrimp	Rock Shrimp		SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Shrimp		Brown Shrimp	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Shrimp		Pink Shrimp	SAFMC	No	Undefined	Unknown**	No	N/A

				Overfished	Approaching	Rebuilding	
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
South Atlantic Snapper- Grouper	Jewfish	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Nassau Grouper	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Vermilion Snapper	SAFMC	Yes	Undefined	Yes**	N/A	Yes
South Atlantic Snapper- Grouper	Red Porgy	SAFMC	Yes	Undefined	Yes**	N/A	Yes
South Atlantic Snapper- Grouper	Gag Grouper	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Red Snapper	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Speckled Hind	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Snowy Grouper	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Warsaw Grouper	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Golden Tilefish	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Black Sea Bass	SAFMC	Yes	Undefined	Yes**	N/A	Yes
South Atlantic Snapper- Grouper	Yellowtail Snapper	SAFMC	Yes	Undefined	Yes**	N/A	Yes
South Atlantic Snapper- Grouper	Red Grouper	SAFMC	Yes	Undefined	Yes**	N/A	No

				Overfished	?	Approaching	Rebuilding Program?
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	
South Atlantic Snapper- Grouper	Black Grouper	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Snapper- Grouper	Wreckfish	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Snapper- Grouper	Scamp	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Snapper- Grouper	White Grunt	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Snapper- Grouper	Greater Amberjack	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Snapper- Grouper	Mutton Snapper	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Snapper- Grouper	Gray (Mangrove) Snapper	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Snapper- Grouper	Lane Snapper	SAFMC	No	Undefined	Unknown**	No	N/A
South Atlantic Snapper- Grouper	Gray Triggerfish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Queen Triggerfish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Ocean Triggerfish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Yellow Jack	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Blue Runner	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
South Atlantic Snapper- Grouper	Crevalle Jack	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Bar Jack	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Lesser Amberjack	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Almaco Jack	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Banded Rudderfish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Spadefish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Black Margate	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Porkfish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Margate	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Tomtate	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Smallmouth Grunt	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	French Grunt	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Spanish Grunt	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A

				Overfished	Approaching	Rebuilding	
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
South Atlantic Snapper- Grouper	Cottonwick	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Sailors Choice	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Blue Stripe Grunt	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Hogfish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Puddingwife	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Black Snapper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Queen Snapper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Schoolmaster	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Blackfin Snapper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Cubera Snapper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Mahogany Snapper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Dog Snapper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Silk Snapper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A

				Overfished	Approaching	Rebuilding	
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
South Atlantic Snapper- Grouper	Blueline Tilefish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Sand Tilefish	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Bank Sea Bass	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Rock Sea Bass	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Rock Hind	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Graysby	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Yellowedge Grouper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Coney	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Red Hind	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Misty Grouper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Yellowmouth Grouper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Tiger Grouper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Yellowfin Grouper	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
South Atlantic Snapper- Grouper	Sheepshead	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Grass Porgy	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Jolthead Porgy	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Saucereye Porgy	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Whitebone Porgy	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Knobbed Porgy	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Longspine Porgy	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Snapper- Grouper	Scup	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
Atlantic Coast Red Drum	Red Drum	SAFMC	Yes	Undefined	Yes**	N/A	No
South Atlantic Corals <sup>1</sup>	Fire Corals	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Corals <sup>1</sup>	Hydrocorals	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Corals <sup>1</sup>	Octocorals	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
South Atlantic Corals <sup>1</sup>	Stony Corals	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
South Atlantic Corals <sup>1</sup>	Black Corals	SAFMC	Unknown	Undefined	Unknown**	Unknown	N/A
Gulf of Mexico Stone Crab	Stone Crab	GMFMC	Undefined	No	No*	No	N/A
Gulf of Mexico Shrimp	Brown Shrimp	GMFMC	Undefined	No	No*	No	N/A
Gulf of Mexico Shrimp	Pink Shrimp	GMFMC	Undefined	No	No*	No	N/A
Gulf of Mexico Shrimp	White Shrimp	GMFMC	Undefined	No	No*	No	N/A
Gulf of Mexico Shrimp	Royal Red Shrimp	GMFMC	No	Undefined	No*	No	N/A
Gulf of Mexico Shrimp	Rock Shrimp	GMFMC	Unknown	Unknown	Unknown <sup>2</sup>	Unknown	N/A
Gulf of Mexico Shrimp	Seabob Shrimp	GMFMC	Unknown	Unknown	Unknown <sup>2</sup>	Unknown	N/A
Gulf of Mexico Corals <sup>3</sup>	Fire Corals	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Gulf of Mexico Corals <sup>3</sup>	Hydrocorals	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Gulf of Mexico Corals <sup>3</sup>	Octocorals	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Gulf of Mexico Corals <sup>3</sup>	Stony Corals	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Gulf of Mexico Corals <sup>3</sup>	Black Corals	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching	Rebuilding	
Fishery Management Plan		Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Gulf of Mexico / South Atlantic Spiny Lobster		Spiny Lobster		No	Undefined	Unknown**	No	N/A
Gulf of Mexico / South Atlantic Spiny Lobster		Slipper Lobster	SAFMC / GMFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Coastal Migratory Pelagics of the Gulf of Mexico	King	Gulf Group	SAFMC / GMFMC	Yes	Undefined	Yes**	N/A	No
and South Atlantic Mackerel	Mackerel	Atlantic Group	SAFMC / GMFMC	No	Undefined	Unknown**	No	N/A
Coastal Migratory Pelagics of the Gulf of Mexico	Spanish	Gulf Group	SAFMC / GMFMC	No	Undefined	Unknown**	No	N/A
and South Atlantic	Mackerel	Atlantic Group	SAFMC / GMFMC	No	Undefined	Unknown**	No	N/A
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic		Cobia	SAFMC/ GMFMC	No	Undefined	Unknown**	No	N/A
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic		Cero	SAFMC / GMFMC	Unknown	Undefined	Unknown**	Unknown	N/A
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic		Dolphin	SAFMC / GMFMC	Unknown	Undefined	Unknown**	Unknown	N/A
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic		Little Tunny	SAFMC / GMFMC	Unknown	Undefined	Unknown**	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic	Bluefish (Gulf of Mexico only)	GMFMC	Unknown	Undefined	Unknown**	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Red Snapper	GMFMC	Yes	Undefined	Yes*	N/A	No
Reef Fish Resources of the Gulf of Mexico	Nassau Grouper	GMFMC	Yes	Undefined	Yes*	N/A	No
Reef Fish Resources of the Gulf of Mexico	Jewfish	GMFMC	Yes	Undefined	Yes*	N/A	No
Reef Fish Resources of the Gulf of Mexico	Vermilion Snapper	GMFMC	No	Undefined	No*	Yes	N/A
Reef Fish Resources of the Gulf of Mexico	Gag Grouper	GMFMC	No	Undefined	No*	Yes	N/A
Reef Fish Resources of the Gulf of Mexico	Greater Amberjack	GMFMC	No	Undefined	No*	No	N/A
Reef Fish Resources of the Gulf of Mexico	Gray Triggerfish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Lesser Amberjack	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Almaco Jack	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Banded Rudderfish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Tomtate	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Pigfish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Reef Fish Resources of the Gulf of Mexico	Queen Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Mutton Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Schoolmaster	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Blackfin Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Cubera Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Gray (Mangrove) Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Dog Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Mahogany Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Lane Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Silk Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Yellowtail Snapper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Wenchman	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Goldface Tilefish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Reef Fish Resources of the Gulf of Mexico	Blackline Tilefish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Anchor Tilefish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Blueline Tilefish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Tilefish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Rock Hind	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Speckled Hind	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Yellowedge Grouper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Red Hind	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Red Grouper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Misty Grouper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Warsaw Grouper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Snowy Grouper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Black Grouper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock J	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Reef Fish Resources of the Gulf of Mexico	Yellowmouth Grouper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Scamp	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Yellowfin Grouper	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Grass Porgy	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Jolthead Porgy	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Hogfish	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Dwarf Sand Perch	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Reef Fish Resources of the Gulf of Mexico	Sand Perch	GMFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Gulf of Mexico Red Drum	Red Drum	GMFMC	Yes	Undefined	Yes*	N/A	No
Caribbean Spiny Lobster <sup>5</sup>	Spiny Lobster	CFMC	No	Undefined	No*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Nassau Grouper	CFMC	Yes	Undefined	Yes*	N/A	No
Caribbean Reef Fish <sup>6</sup>	Jewfish	CFMC	Yes	Undefined	Yes*	N/A	No
Caribbean Reef Fish <sup>6</sup>	Ocean Surgeonfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Doctorfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Blue Tang	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Caribbean Reef Fish <sup>6</sup>	Frogfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Flamefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Conchfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Trumpetfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Scrawled Filefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Queen Triggerfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Whitespotted Filefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Ocean Triggerfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Black Durgon	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Sargassum Triggerfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Redlip Blenny	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Peacock Flounder	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellow Jack	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Blue Runner	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Horse-eye Jack	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Black Jack	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Bar Jack	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Caribbean Reef Fish <sup>6</sup>	Greater Amberjack	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Almaco Jack	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Longsnout Butterflyfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Foureye Butterflyfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Spotfin Butterflyfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Banded Butterflyfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Redspotted Hawkfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Flying Gurnard	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Atlantic Spadefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Neon Goby	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Rusty Goby	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Royal Gramma	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Porkfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Margate	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Tomtate	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	French Grunt	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	White Grunt	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching	Rebuilding Program?
Fishery Management Plan	Stock .	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	
Caribbean Reef Fish <sup>6</sup>	Bluestriped Grunt	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Squirrelfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Longspine Squirrelfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Blackbar Soldierfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Cardinal Soldierfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Spanish Hogfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Creole Wrasse	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellowcheek Wrasse	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellowhead Wrasse	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Clown Wrasse	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Puddingwife	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Pearly Razorfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Green Razorfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Hogfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Bluehead Wrasse	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Black Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Queen Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Caribbean Reef Fish <sup>6</sup>	Mutton Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Schoolmaster	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Blackfin Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Gray Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Dog Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Mahogany Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Lane Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Silk Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellowtail Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Wenchman	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Vermilion Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Blackline Tilefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Sand Tilefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellow Goatfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Spotted Goatfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Chain Moray	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Green Moray	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?	Approaching	Rebuilding Program?
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	
Caribbean Reef Fish <sup>6</sup>	Goldentail Moray	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Batfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Goldspotted Eel	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellowhead Jawfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Dusky Jawfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Spotted Trunkfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Honeycomb Cowfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Scrawled Cowfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Trunkfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Smooth Trunkfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Cherubfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Queen Angelfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Rock Beauty	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Gray Angelfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	French Angelfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Sergeant Major	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Blue Chromis	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

Fishery Management Plan	Stock		Overfished?			Approaching	Rebuilding
		Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Caribbean Reef Fish <sup>6</sup>	Sunshinefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellowtail Damselfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Dusky Damselfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Beaugregory	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Bicolor Damselfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Threespot Damselfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Bigeye	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Glasseye Snapper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Midnight Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Blue Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Striped Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Rainbow Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Princess Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Queen Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Redband Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Redtail Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Redfin Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

Fishery Management Plan	Stock	Jurisdiction		Overfished	Approaching	Rebuilding	
			Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Caribbean Reef Fish <sup>6</sup>	Stoplight Parrotfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	High-hat	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Jackknife-fish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Spotted Drum	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Scorpionfishes	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Rock Hind	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Graysby	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellowedge Grouper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Coney	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Red Hind	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Red Grouper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Misty Grouper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Butter Hamlet	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Swissguard Basslet	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Yellowfin Grouper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Tiger Grouper	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Creole-fish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

Fishery Management Plan	Stock			Overfished	Approaching	Rebuilding	
		Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Caribbean Reef Fish <sup>6</sup>	Greater Soapfish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Orangeback Bass	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Lantern Bass	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Tobaccofish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Harlequin Bass	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Chalk Bass	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Caribbean Tonguefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Sea Bream	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Jolthead Porgy	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Sheepshead Porgy	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Pluma	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Seahorses	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Pipefishes	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Sand Diver	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Sharpnose Puffer	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Reef Fish <sup>6</sup>	Porcupinefish	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Queen Conch	CFMC	Yes	Undefined	Yes*	N/A	No

Fishery Management Plan	Stock			Overfished	Approaching	Rebuilding	
		Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Caribbean Queen Conch <sup>7</sup>	Atlantic Triton's Trumpet	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Cameo Helmet	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Caribbean Helmet	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Caribbean Vase	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Flame Helmet	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Green Star Shell	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Hawkwing Conch	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Milk Conch	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Roostertail Conch	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	True Tulip	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	West Indian Fighting Conch	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Queen Conch <sup>7</sup>	Whelk (West Indian Top Shell)	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Corals <sup>8</sup>	Sponges	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Hydrocorals	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Hydroids	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Soft Corals	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Gorgonian Corals	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

Fishery Management Plan	Stock		Overfished?			Approaching	Rebuilding
		Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Caribbean Corals <sup>8</sup>	Hard Corals	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Black Corals	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Anemones	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Colonial Anemones	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	False Corals	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Annelid Worms	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Other Gastropods	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Bivalves	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Cephalopods	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Crustaceans	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Bryozoans	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Feather Stars	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Sea Stars	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Brittle and Basket Stars	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Sea Urchins	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Sea Cucumbers	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A
Caribbean Corals <sup>8</sup>	Tunicates	CFMC	Unknown	Undefined	Unknown*	Unknown	N/A

				Overfished	?		Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Caribbean Corals <sup>8</sup>	Green Algae	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Corals <sup>8</sup>	Red Algae	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Caribbean Corals <sup>8</sup>	Seagrasses	CFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
WA, OR, CA Salmon	Chinook Salmon (Columbia River, upriver Summer)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Chinook Salmon (Columbia River, upriver Spring)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Chinook Salmon (Columbia River, Snake River, Spring)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Chinook Salmon (Skagit River, Spring)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Chinook Salmon (Skagit River, Summer / Fall)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Chinook Salmon (Stillaguamish River, Summer / Fall)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Chinook Salmon (Snohomish River, Summer / Fall)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Chinook Salmon (Lake Washington)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Chinook Salmon (Dungeness River)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	Coho Salmon (Strait of Juan de Fuca)	PFMC	Undefined	Yes	Yes*	N/A	No
WA, OR, CA Salmon	other Chinook Salmon stocks	PFMC	Undefined	No	No*	No	N/A
WA, OR, CA Salmon	other Coho Salmon stocks	PFMC	Undefined	No	No*	No	N/A
WA, OR, CA Salmon	Sockeye Salmon	PFMC	No	No	No <sup>9</sup>	Unknown	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
WA, OR, CA Salmon	Pink Salmon	PFMC	No	No	No <sup>9</sup>	Unknown	N/A
WA, OR, CA Salmon	Chum Salmon	PFMC	No	No	No <sup>9</sup>	Unknown	N/A
WA, OR, CA Salmon	Steelhead	PFMC	Unknown	Unknown	Unknown <sup>10</sup>	Unknown	N/A
Coastal Pelagic Species	Pacific (Chub) Mackerel	PFMC	No	No	No	No	N/A
Coastal Pelagic Species	Pacific Sardine	PFMC	No	No	No	No	N/A
Coastal Pelagic Species	Jack Mackerel	PFMC	No	Undefined	Unknown**	Unknown	N/A
Coastal Pelagic Species	Northern Anchovy	PFMC	No	Undefined	Unknown**	Unknown	N/A
Coastal Pelagic Species	Market Squid	PFMC	No	Undefined	Unknown **	Unknown	N/A
WA, OR, CA Groundfish	Lingcod	PFMC	No	Yes	Yes <sup>11</sup>	N/A	No
WA, OR, CA Groundfish	Pacific Ocean Perch	PFMC	No	Yes	Yes <sup>11</sup>	N/A	No
WA, OR, CA Groundfish	Bocaccio	PFMC	No	Yes	Yes <sup>11</sup>	N/A	No
WA, OR, CA Groundfish	Bank Rockfish	PFMC	Yes	Unknown	Yes	N/A	No
WA, OR, CA Groundfish	Darkblotched Rockfish	PFMC	Yes	Unknown	Yes	N/A	No
WA, OR, CA Groundfish	Silvergrey Rockfish	PFMC	Yes	Unknown	Yes	N/A	No
WA, OR, CA Groundfish	Canary Rockfish	PFMC	No	Unknown	Unknown	Yes	N/A
WA, OR, CA Groundfish	Shortspine Thornyhead	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	Yellowtail Rockfish	PFMC	No	No	No	No	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
WA, OR, CA Groundfish	Pacific Whiting	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	Sablefish	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	Dover Sole	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	English Sole	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	Petrale Sole	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	Chilipepper Rockfish	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	Shortbelly Rockfish	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	Longspine Thornyhead	PFMC	No	No	No	No	N/A
WA, OR, CA Groundfish	Widow Rockfish	PFMC	No	Unknown	Unknown	No	N/A
WA, OR, CA Groundfish	Cowcod	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Pacific Cod	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Arrowtooth Flounder	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Butter Sole	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Curlfin Sole	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Flathead Sole	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Pacific Sanddab	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Rex Sole	PFMC	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
WA, OR, CA Groundfish	Rock Sole	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Sand Sole	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Starry Flounder	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Aurora Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Black Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Black-and-Yellow Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Blackgill Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Blue Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Bronzespotted Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
WA, OR, CA Groundfish	Brown Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Calico Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	China Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Copper Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Dusty Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Flag Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Gopher Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Grass Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Greenblotched Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Greenspotted Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Greenstriped Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Harlequin Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Honeycomb Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Kelp Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Mexican Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Olive Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Pink Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
WA, OR, CA Groundfish	Quillback Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Redbanded Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Redstripe Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Rosethorn Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Rosy Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Rougheye Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Sharpchin Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Shortraker Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Speckled Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Splitnose Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Squarespot Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Starry Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Stripetail Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Tiger Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Vermilion Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Yelloweye Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Yellowmouth Rockfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
WA, OR, CA Groundfish	Leopard Shark	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Soupfin Shark	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Spiny Dogfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Big Skate	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	California Skate	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Longnose Skate	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Ratfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Finescale Codling	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Pacific Rattail	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Cabezon	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Kelp Greenling	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	California Scorpionfish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
WA, OR, CA Groundfish	Treefish	PFMC	Unknown	Unknown	Unknown	Unknown	N/A
Western Pacific Crustaceans	Spiny Lobster (2 species)	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Crustaceans	Slipper Lobster	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Crustaceans	Kona Crab	WPFMC	Unknown	Unknown	Unknown <sup>4</sup>	Unknown	N/A
Western Pacific Corals <sup>12</sup>	Pink Corals (3 species)	WPFMC	No	No	No	No	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Western Pacific Corals <sup>12</sup>	Gold Corals (4 species)	WPFMC	No	No	No	No	N/A
Western Pacific Corals <sup>12</sup>	Bamboo Corals (2 species)	WPFMC	No	No	No	No	N/A
Western Pacific Corals <sup>12</sup>	Black Corals (3 species)	WPFMC	No	No	No	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Pelagic Armorhead	WPFMC	Undefined	Yes	Yes*	N/A	Yes
Bottomfish and Seamount Groundfish of the Western Pacific	Seabass (Main Hawaiian Islands)	WPFMC	Undefined	No	No*	Yes	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Squirrelfish Snapper (Northwest and Main Hawaiian Islands)	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Longtail Snapper (Northwest and Main Hawaiian Islands)	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Silverjaw Jobfish	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Gray Jobfish	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Bluestripe Snapper	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Yellowtail Snapper	WPFMC	Undefined	No	No*	No	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Bottomfish and Seamount Groundfish of the Western Pacific	Pink Snapper	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Yelloweye Snapper	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Snapper <u>Pristipomoides sieboldii</u>	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Snapper Pristipomoides zonatus	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Giant Trevally	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Black Jack	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Thick Lipped Trevally	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Amberjack	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Blacktip Grouper	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the Western Pacific	Seabass (Northwest Hawaiian Islands)	WPFMC	Undefined	No	No*	No	N/A

	Stock			Overfished	?	Approaching	Rebuilding
Fishery Management Plan		Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bottomfish and Seamount Groundfish of the	Lunartail Grouper	WPFMC	Undefined	No	No*	No	N/A
Western Pacific	Lunartan Grouper	WPFMC	Undermed	NO	No*	No	N/A
Bottomfish and Seamount							
Groundfish of the Western Pacific	Ambon Emperor	WPFMC	Undefined	No	No*	No	N/A
Bottomfish and Seamount Groundfish of the	Dodoill Emmanon	WPFMC	Undefined	No	N *	N.	N/A
Western Pacific	Redgill Emperor	WPFMC	Undermed	No	No*	No	N/A
Bottomfish and Seamount							
Groundfish of the Western Pacific	Alfonsin	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Bottomfish and Seamount							
Groundfish of the	Ratfish	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific							
Western Pacific Pelagics	Yellowfin Tuna (Central Western Pacific)	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Pelagics	Albacore (South Pacific)	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Pelagics	Albacore (North Pacific)	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Pelagics	Yellowfin Tuna (Eastern Tropical Pacific)	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Pelagics	Skipjack Tuna (Central Western Pacific)	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Pelagics	Skipjack Tuna (Eastern Tropical Pacific)	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Pelagics	Striped Marlin	WPFMC	Undefined	No	No*	No	N/A
Western Pacific Pelagics	Black Marlin	WPFMC	Undefined	No	No*	Unknown	N/A
Western Pacific Pelagics	Bigeye Tuna (Pacific)	WPFMC	Undefined	No	No*	Unknown	N/A

					Overfished	?	Approaching	Rebuilding
Fishery Management Plan		Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
	Other tuna	Auxis spp.	WPFMC	Undefined	No	No*	Unknown	N/A
Western Pacific Pelagics	relatives	Scomber spp.	WPFMC	Undefined	No	No*	Unknown	N/A
		Allothunnus spp.	WPFMC	Undefined	No	No*	Unknown	N/A
Western Pacific Pelagics	Sv	Swordfish (Pacific)		Undefined	No	No*	Unknown	N/A
Western Pacific Pelagics		Pomfret	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics	S	Sailfish (Pacific)		Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics	Shorth	Shortbill Spearfish (Pacific)		Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics	,	Wahoo (Pacific)	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics	M	ahimahi (Pacific)	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics	Pela	gic Sharks (Pacific)	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics	Blı	ue Marlin (Pacific)	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics		Opah	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics		Oilfish	WPFMC	Undefined	Unknown	Unknown*	Unknown	N/A
Western Pacific Pelagics		Escolar		Undefined	Unknown	Unknown*	Unknown	N/A
Gulf of Alaska Groundfish	Western /	Central Walleye Pollock	NPFMC	No	No	No	No	N/A
Gulf of Alaska Groundfish	Easte	ern Walleye Pollock	NPFMC	No	No	No	No	N/A
Gulf of Alaska Groundfish		Pacific Cod	NPFMC	No	No	No	No	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Gulf of Alaska Groundfish	Sablefish	NPFMC	No	No	No	No	N/A
Gulf of Alaska Groundfish	Shortspine Thornyhead	NPFMC	No	No	No	No	N/A
Gulf of Alaska Groundfish	Arrowtooth Flounder	NPFMC	No	No	No	No	N/A
Gulf of Alaska Groundfish	Western Pacific Ocean Perch	NPFMC	No	No	No	No	N/A
Gulf of Alaska Groundfish	Central Pacific Ocean Perch	NPFMC	No	No	No	No	N/A
Gulf of Alaska Groundfish	Eastern Pacific Ocean Perch	NPFMC	No	No	No	No	N/A
Gulf of Alaska Groundfish	Atka Mackerel	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Alaska Plaice	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Butter Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Deepsea Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Dover Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	English Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Flathead Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Greenland Turbot	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Rex Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Northern Rock Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Southern Rock Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Gulf of Alaska Groundfish	Sand Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Starry Flounder	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Yellowfin Sole	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Dusky Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Yelloweye Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Aurora Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Blackgill Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Bocaccio	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Chilipepper	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Darkblotched Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Greenstriped Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Harlequin Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Northern Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Pygmy Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Redbanded Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Redstripe Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Rougheye Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Gulf of Alaska Groundfish	Sharpchin Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Shortbelly Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Shortraker Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Silvergrey Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Splitnose Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Stripetail Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Vermilion Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Yellowmouth Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	C-O Sole	NPFMC	Unknown <sup>13</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Curlfin Sole	NPFMC	Unknown <sup>13</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Hybrid Sole	NPFMC	Unknown <sup>13</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Longhead Dab	NPFMC	Unknown <sup>13</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Pacific Sanddab	NPFMC	Unknown <sup>13</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Petrale Sole	NPFMC	Unknown <sup>13</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Roughscale Sole	NPFMC	Unknown <sup>13</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Slender Sole	NPFMC	Unknown <sup>13</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Bering Flounder	NPFMC	Unknown <sup>14</sup>	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Gulf of Alaska Groundfish	Kamchatka Flounder	NPFMC	Unknown <sup>15</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Black Rockfish	NPFMC	Unknown <sup>16</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Blue Rockfish	NPFMC	Unknown <sup>16</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Widow Rockfish	NPFMC	Unknown <sup>16</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Yellowtail Rockfish	NPFMC	Unknown <sup>16</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Canary Rockfish	NPFMC	Unknown <sup>17</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	China Rockfish	NPFMC	Unknown <sup>17</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Copper Rockfish	NPFMC	Unknown <sup>17</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Quillback Rockfish	NPFMC	Unknown <sup>17</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Rosethorn Rockfish	NPFMC	Unknown <sup>17</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Tiger Rockfish	NPFMC	Unknown <sup>17</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Broad Banded Thornyhead	NPFMC	Unknown <sup>18</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Longspine Thornyhead	NPFMC	Unknown <sup>18</sup>	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Blue Shark	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Brown Cat Shark	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Pacific Sleeper Shark	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Salmon Shark	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Gulf of Alaska Groundfish	Sixgill Shark	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Spiny Dogfish Shark	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Alaska Skate	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Aleutian Skate	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Big Skate	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Flathead Skate	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Longnose Skate	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Roughtail Skate	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Sandpaper Skate	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Starry Skate	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Armorhead Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Bigmouth Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Blackfin Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Dusky Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Great Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Red Irish Lord	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Ribbed Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Gulf of Alaska Groundfish	Roughspine Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Spinyhead Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Tadpole Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Thorny Sculpin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Yellow Irish Lord	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Ocotpus Octopus dofleini	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Octopus Opisthoteuthis california	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Squid Berryteuthis magister	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Squid Onychoteuthis borealijaponicus	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Capelin	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Eulachon	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Gulf of Alaska Groundfish	Rainbow Smelt	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Alaska High Seas Salmon	Pink Salmon	NPFMC	Undefined	No	No*	No	N/A
Alaska High Seas Salmon	Sockeye Salmon	NPFMC	Undefined	No	No*	No	N/A
Alaska High Seas Salmon	Chum Salmon	NPFMC	Undefined	No	No*	No	N/A
Alaska High Seas Salmon	Coho Salmon	NPFMC	Undefined	No	No*	No	N/A
Alaska High Seas Salmon	Chinook Salmon	NPFMC	Undefined	No	No*	No	N/A

				Overfished	?	Approaching	Rebuilding	
Fishery Management Plan		Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
		Eastern Bering Sea	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	Walleye Pollock	Aleutian Islands	NPFMC	No	Unknown	Unknown	Unknown	N/A
		Bogoslof	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish		Pacific Cod	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish		Yellowfin Sole		No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	C	Greenland Turbot		No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	Ar	rowtooth Flounder	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish		Rock Sole	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish		Flathead Sole	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	Easterr	n Bering Sea Sablefish	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	Aleut	ian Islands Sablefish	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	Eastern Beri	ng Sea Pacific Ocean Perch	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	Aleutian Is	lands Pacific Ocean Perch	NPFMC	No	No	No	No	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Bering Sea / Aleutian Islands Groundfish	Atka Mackerel	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	Alaska Plaice	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands Groundfish	Eastern Bering Sea Northern Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Aleutian Islands Northern Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Eastern Bering Sea Sharpchin Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Aleutian Islands Sharpchin Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Eastern Bering Sea Shortraker Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Aleutian Islands Shortraker Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Eastern Bering Sea Rougheye Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Aleutian Islands Rougheye Rockfish	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Squid Berryteuthis magister	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Squid Onychoteuthis borealijaponicus	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Longspine Thornyhead	NPFMC	No	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands Groundfish	Shortspine Thornyhead	NPFMC	No	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Bering Flounder	NPFMC	Unknown <sup>14</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Kamchatka Flounder	NPFMC	Unknown <sup>15</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Arctic Flounder	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Butter Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	C-O Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	California Tonguefish	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Curlfin Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Deepsea Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Dover Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	English Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Hybrid Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Longhead Dab	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands Groundfish	Pacific Sanddab	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Petrale Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Rex Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Roughscale Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Sand Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Slender Sole	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Starry Flounder	NPFMC	Unknown <sup>19</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Aurora Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Black Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Blackgill Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Blue Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Bocaccio	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Brown Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands Groundfish	Canary Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Chameleon Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Chilipepper	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Copper Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Darkblotched Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Dusky Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Gray Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Greenstriped Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Harlequin Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Pink Rose Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Pygmy Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Redbanded Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Redstripe Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands Groundfish	Rosethorn Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Rosy Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Silvergrey Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Splitnose Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Stripetail Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Tiger Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Vermilion Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Widow Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Yelloweye Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Yellowmouth Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Yellowtail Rockfish	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Broad Banded Thornyhead	NPFMC	Unknown <sup>20</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Antlered Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands Groundfish	Armorhead Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Bigmouth Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Blackfin Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Blob Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Brown Irish Lord	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Butterfly Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Calico Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Crested Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Dusky Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Great Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Pacific Staghorn Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Plain Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Red Irish Lord	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands Groundfish	Ribbed Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Scissortail Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Shorthorn Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Spinyhead Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Tadpole Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Thorny Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Warty Sculpin	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Yellow Irish Lord	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Alaska Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Aleutian Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Big Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Commander Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Deepsea Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands Groundfish	Golden Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Longnose Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Mud Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Okhotsk Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Roughtail Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Sandpiper Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Starry Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	White-Blotched Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Whitebrow Skate	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Blue Shark	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Pacific Sleeper Shark	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Salmon Shark	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Sixgill Shark	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Fishing Overfished? Overfished?	Overfished Condition?	Program?	
Bering Sea / Aleutian Islands Groundfish	Soupfin Shark	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Spiny Dogfish Shark	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A

					Overfished	?	Approaching	Rebuilding
Fishery Management Plan		Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands Groundfish		Capelin		Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish		Eulachon	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish		Rainbow Smelt	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Octop	ous Octopus dofleini	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands Groundfish	Octopus (	Opisthoteuthis california	NPFMC	Unknown <sup>21</sup>	Unknown	Unknown	Unknown	N/A
		Pribilof Islands	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands King and	Blue King Crab	Saint Matthew Island	NPFMC	No	Yes	Yes	N/A	No
Tanner Crabs		Saint Lawrence Island	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
		Aleutian Islands	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands King and	Golden King Crab	Pribilof Islands	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Tanner Crabs		Northern District	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
		Bristol Bay	NPFMC	No	No	No	No	N/A
Bering Sea / Aleutian Islands King and Tanner Crabs	Red King	Norton Sound	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
	Crab	Pribilof Islands	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
		Aleutian Islands	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A

					Overfished	?	Approaching	Rebuilding
Fishery Management Plan		Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Bering Sea / Aleutian Islands King and Tanner Crabs	Aleutian I	Aleutian Islands Scarlet King Crab		Unknown	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands King and Tanner Crabs	Beri	Bering Sea Snow Crab		No	Yes	Yes	N/A	No
		Bering Sea	NPFMC	No	Yes	Yes	N/A	No
		Bering Sea Triangle	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
		Bering Sea Grooved	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Bering Sea / Aleutian Islands King and	Tanner Crab	Eastern Aleutian Islands	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Tanner Crabs		Eastern Aleutian Islands Triangle	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
		Eastern Aleutian Islands Grooved	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
		Adak (Western Aleutians)	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
		Western Aleutian Islands Grooved	NPFMC	Unknown	Unknown	Unknown	Unknown	N/A
Alaska Scallops	1	Alaska Scallops	NPFMC	No	No	No	No	N/A
Atlantic Billfishes	Blue M	Blue Marlin (North Atlantic)		Yes	Yes	Yes***	N/A	Yes
Atlantic Billfishes	White M	White Marlin (North Atlantic)		Yes	Yes	Yes***	N/A	Yes
Atlantic Billfishes	Sailf	ish (West Atlantic)	HMS	Yes	Yes	Yes***	N/A	Yes

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Atlantic Billfishes	Spearfish (West Atlantic)	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Bigeye Tuna (Atlantic)	HMS	Yes	No	Yes***	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Albacore (North Atlantic)	HMS	Yes	Yes	Yes***	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Bluefin Tuna (West Atlantic)	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Swordfish (North Atlantic)	HMS	Yes	Yes	Yes***	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Sandbar Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Blacktip Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Dusky Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Spinner Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Silky Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Bull Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Bignose Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Narrowtooth Shark	HMS	Yes	Yes	Yes	N/A	Yes

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Atlantic Tunas, Swordfish and Sharks	Galapagos Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Night Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Caribbean Reef Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Tiger Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Lemon Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Sand Tiger Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Bigeye Sand Tiger Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Nurse Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Scalloped Hammerhead Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Great Hammerhead Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Smooth Hammerhead Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Whale Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Basking Shark	HMS	Yes	Yes	Yes	N/A	Yes

				Overfished	?	Approaching	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Atlantic Tunas, Swordfish and Sharks	White Shark	HMS	Yes	Yes	Yes	N/A	Yes
Atlantic Tunas, Swordfish and Sharks	Yellowfin Tuna (West Atlantic)	HMS	No	No	No	No	N/A
Atlantic Tunas, Swordfish and Sharks	Atlantic Sharpnose Shark	HMS	No	No	No	No	N/A
Atlantic Tunas, Swordfish and Sharks	Caribbean Sharpnose Shark	HMS	No	No	No	No	N/A
Atlantic Tunas, Swordfish and Sharks	Finetooth Shark	HMS	No	No	No	No	N/A
Atlantic Tunas, Swordfish and Sharks	Blacknose Shark	HMS	No	No	No	No	N/A
Atlantic Tunas, Swordfish and Sharks	Smalltail Shark	HMS	No	No	No	No	N/A
Atlantic Tunas, Swordfish and Sharks	Bonnethead Shark	HMS	No	No	No	No	N/A
Atlantic Tunas, Swordfish and Sharks	Atlantic Angel Shark	HMS	No	No	No	No	N/A
Atlantic Tunas, Swordfish and Sharks	Skipjack Tuna (West Atlantic)	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Shortfin Mako Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Longfin Mako Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Porbeagle Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching	Rebuilding Program?
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	
Atlantic Tunas, Swordfish and Sharks	Thresher Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Bigeye Thresher Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Blue Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Oceanic Whitetip Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Sevengill Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Sixgill Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Bigeye Sixgill Sharks	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Iceland Cat Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Smallfin Cat Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Deepwater Cat Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Broadgill Cat Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Marbled Cat Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Blotched Cat Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Atlantic Tunas, Swordfish and Sharks	Chain Dogfish	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Dwarf Catshark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Japanese Gulper Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Gulper Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Little Gulper Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Kitefin Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Flatnose Gulper Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Portuguese Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Greenland Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Lined Lanternshark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Broadband Dogfish	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Caribbean Lanternshark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Great Lanternshark	HMS	Unknown	Unknown	Unknown	Unknown	N/A

				Overfished	?	Approaching Overfished Condition?	Rebuilding
Fishery Management Plan	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?		Program?
Atlantic Tunas, Swordfish and Sharks	Smooth Lanternshark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Fringefin Lanternshark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Green Lanternshark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Cookiecutter Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Bigtooth Cookiecutter	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Smallmouth Velvet Dogfish	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Pygmy Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Roughskin Spiny Dogfish	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Blainville's Dogfish	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Cuban Dogfish	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Bramble Shark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	American Sawshark	HMS	Unknown	Unknown	Unknown	Unknown	N/A
Atlantic Tunas, Swordfish and Sharks	Florida Smoothhound	HMS	Unknown	Unknown	Unknown	Unknown	N/A

Fishery Management Plan				Overfished	?	Approaching	Rebuilding
	Stock	Jurisdiction	Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?	Program?
Atlantic Tunas, Swordfish and Sharks	Smooth Dogfish	HMS	Unknown	Unknown	Unknown	Unknown	N/A

- \* Pre-SFA overfishing definition. May not include both Fishing Mortality Rate and Stock Level / Biomass criteria.
- \*\* Partially approved overfishing definition. May not include both Fishing Mortality Rate and Stock Level / Biomass criteria.
- \*\*\* The HMS and Atlantic Billfish FMPs contain a rebuilding plan to develop an international rebuilding program, which requires adoption by the International Commission for the Conservation of Atlantic Tunas.
- 1. The full name for this FMP is the Coral, Coral Reefs, and Live / Hard Bottom Habitats of the South Atlantic Region.
- 2. There is no overfishing definition contained in the FMP; the definition for determining the overfished status is based on the definition in <u>Our Living</u> Oceans.
- 3. The full name for this FMP is the Coral and Coral Reefs of the Gulf of Mexico.
- 4. There is no overfishing definition contained in the FMP, and no definition for determining the overfished status in Our Living Oceans.
- 5. The full name for this FMP is the Spiny Lobster Fishery of Puerto Rico and the U.S. Virgin Islands.
- 6. The full name for this FMP is the Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands.
- 7. The full name for this FMP is the Queen Conch Resources of Puerto Rico and the U.S. Virgin Islands.
- 8. The full name for this FMP is the Corals and Reef Associated Invertebrates of Puerto Rico and the U.S. Virgin Islands.
- 9. Used assessment from Our Living Oceans; the overfishing definition contained in the FMP does not apply because there are no escapement goals or management objectives for this species.
- 10. The overfishing definition contained in the FMP does not apply because there are no escapement goals or management objectives for this species, and there is no definition for determining the overfished status in Our Living Oceans.
- 11. The Pacific Fishery Management Council was notified on March 3, 1999 that this species is overfished and the Council is required to submit a rebuilding program within one year of that date.
- 12. The full name for this FMP is the Precious Corals Fishery of the Western Pacific Region.
- 13. The fishing mortality rate determination for this species complex (Shallow Water Flatfish complex) is "not overfished" based on Alaska Plaice, Butter Sole, English Sole, Northern Rock Sole, Southern Rock Sole, Sand Sole, Starry Flounder, and Yellowfin Sole; no fishing mortality rate determination can be made about the other species.

- 14. The fishing mortality rate determination for this species complex (Flathead Sole complex) is "not overfished" based on Flathead Sole; no fishing mortality rate determination can be made about the other species.
- 15. The fishing mortality rate determination for this species complex (Arrowtooth Flounder complex) is "not overfished" based on Arrowtooth Flounder; no fishing mortality rate determination can be made about the other species.
- 16. The fishing mortality rate determination for this species complex (Pelagic Shelf Rockfish complex) is "not overfished" based on Dusky Rockfish; no fishing mortality rate determination can be made about the other species.
- 17. The fishing mortality rate determination for this species complex (Demersal Shelf Rockfish complex) is "not overfished" based on Yelloweye Rockfish; no fishing mortality rate determination can be made about the other species.
- 18. The fishing mortality rate determination for this species complex (Thornyhead Rockfish complex) is "not overfished" based on Shortspine Thornyhead; no fishing mortality rate determination can be made about the other species.
- 19. The fishing mortality rate determination for this species complex (Other Flatfish complex) is "not overfished" based on Alaska Plaice; no fishing mortality rate determination can be made about the other species.
- 20. The fishing mortality rate determination for this species complex (Other Rockfish complex) is "not overfished" based on Longspine Thornyhead and Shortspine Thornyhead; no fishing mortality rate determination can be made about the other species.
- 21. The fishing mortality rate determination for this species complex (Other Species complex) is "not overfished" based on abundance estimates of the complex; no fishing mortality rate determination can be made about the individual species.

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

Stock	Jurisdiction	Overfished?			Approaching
		Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?
Little Skate	NEFMC / MAFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Winter Skate	NEFMC / MAFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Barndoor Skate	NEFMC / MAFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Thorny Skate	NEFMC / MAFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Brier Skate	NEFMC / MAFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Leopard Skate	NEFMC / MAFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Smooth-tailed Skate	NEFMC / MAFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Queen Triggerfish	GMFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Weakfish	ASMFC	No	Yes	Yes <sup>2</sup>	N/A
Spotted Seatrout	ASMFC	Unknown	Unknown	Unknown <sup>3</sup>	Unknown
Spot	ASMFC	Unknown	Unknown	Unknown <sup>3</sup>	Unknown
Atlantic Croaker	ASMFC	Yes	Yes	Yes <sup>2</sup>	N/A
Atlantic Menhaden	ASMFC	No	No	No <sup>2</sup>	Unknown
Striped Bass	ASMFC	No	No	No <sup>2</sup>	Unknown
Northern Shrimp	ASMFC	No	No	No	Yes <sup>4</sup>
Gulf Menhaden	GSMFC	No	No	No <sup>2</sup>	Unknown

Stock	Jurisdiction	Overfished?			Approaching
		Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?
Black Drum	GSMFC	Unknown	Unknown	Unknown <sup>3</sup>	Unknown
Pacific Bonito	PFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
California Barracuda	PFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
White Seabass	PFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
White Croaker	PFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Yellowtail	PFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Giant Squid	PFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Mackerel Scad	WPFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Bigeye Scad	WPFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Pacific Halibut	PFMC and NPFMC <sup>5</sup>	No	Undefined	No*	No
Rattails	NPFMC	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Sea Snails	NPFMC	Unknown	Unknown	Unknown <sup>3</sup>	Unknown
Bonito (Atlantic)	HMS	Unknown	Unknown	Unknown <sup>1</sup>	Unknown
Little Tunny (Atlantic)	HMS	Unknown	Unknown	Unknown <sup>1</sup>	Unknown

- \* Pre-SFA overfishing definition. May not include both Fishing Mortality Rate and Stock Level / Biomass criteria.
- 1. There is no FMP for this species, and no definition for determining the overfished status in Our Living Oceans.
- 2. Used assessment from Our Living Oceans; there is no FMP for this species.
- 3. There is no FMP for this species; the definition for determining the overfished status is based on the definition in Our Living Oceans.
- 4. Assessment is based on NEFSC autumn bottom trawl survey and the ASMFC summer shrimp survey (NOAA Technical Memorandum NMFS-NE 115, Status of Fishery Resources off the Northeastern United States for 1998).
- 5. 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.

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

Stock	Jurisdiction	Overfished?			Approaching
		Fishing Mortality Rate	Biomass	Overfished?	Overfished Condition?
Tilefish	MAFMC	Yes	Yes	Yes <sup>1</sup>	N/A
Atlantic Herring	NEFMC	No	Undefined	No*	No
Spiny Dogfish	NEFMC / MAFMC	Yes	Unknown	Yes*	N/A
Wahoo	SAFMC	Unknown	Unknown	Unknown <sup>2</sup>	Unknown
Calico Scallops	SAFMC	Unknown	Unknown	Unknown <sup>3</sup>	Unknown

<sup>\*</sup> Pre-SFA overfishing definition. May not include both Fishing Mortality Rate and Stock Level / Biomass criteria.

- 1. Used assessment from Our Living Oceans; there is no FMP for this species.
- 2. There is no FMP for this species, and no definition for determining the overfished status in Our Living Oceans.
- 3. There is no FMP for this species; the definition for determining the overfished status is based on the definition in Our Living Oceans.

### **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.

<u>Atlantic Sea Scallop</u> – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{max}$ , which is currently 0.24, when the stock biomass is equal to or greater than  $B_{max}$ .

A stock is overfished when stock biomass is below  ${}^{1}\!\!/4B_{max}$  and overfishing occurs when F is greater than zero.

<u>Atlantic Salmon</u> - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing is currently not defined (fishing mortality is set equal to zero).

A stock is overfished when the stock biomass falls below  $B_{MSY}$  (54,000 spawning salmon is set as a proxy for  $B_{MSY}$ )

<u>American Lobster</u> - The following overfishing definition was approved under pre-SFA guidelines and the assessments contained in this report are based on this definition. This definition contains only a fishing mortality rate (F) component. An overfishing definition consistent with SFA guidelines is currently under review.

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 definitions were fully approved under SFA guidelines, however, they were not used to make the assessments contained in this report because peer reviewed assessments were not available under the new definitions. The overfishing definition approved under pre-SFA guidelines was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

Pre-SFA: Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

SFA: Cod (Gulf of Maine) - Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.31). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of  $F_{msy}$ .

A stock is overfished when the total stock biomass (TSB) is less than  $B_{msy}$  (estimated to be 33,000 mt).

SFA: Cod (Georges Bank) - Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.32). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of  $F_{msy}$ .

A stock is overfished when the total stock biomass (TSB) is less than  $B_{msy}$  (estimated to be 108,000 mt).

**Haddock** (**Georges Bank**) – The overfishing definition was fully approved under SFA guidelines, however, it was not used to make the assessments contained in this report because peer reviewed assessments were not available under the new definition. The overfishing definition approved under pre-SFA guidelines was used to make the assessments contained in this report. This definition contains only a fishing morality rate (F) component.

Pre-SFA: 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.

SFA: Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.26). The target fishing mortality for the stock is the lower 75<sup>th</sup> percentile of  $F_{msy}$ .

A stock is overfished when the spawning stock biomass (SSB) is less than  $B_{msy}$  (estimated to be 105,000 mt, the mean SSB from 1931-1961).

**Haddock** (**Gulf of Maine**) - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{msy}$  (estimated by proxy to be a relative exploitation index [catch/survey biomass] of 0.29). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of  $F_{msy}$ .

A stock is overfished when the total stock biomass (TSB) is less than the survey proxy for  $B_{msy}$  (8.25 kg/tow from the NMFS Autumn survey).

**Yellowtail Flounder (Georges Bank, Southern New England, Middle Atlantic)** – Overfishing definitions were fully approved under SFA guidelines, however, they were not used to make the assessments contained in this report because peer reviewed assessments were not available under the new definitions. The overfishing definition approved under pre-SFA guidelines was used to make the assessments contained in this report. This definition contains only a fishing morality rate (F) component.

Pre-SFA; Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

SFA: Yellowtail Flounder (Georges Bank) – Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.30). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of  $F_{msy}$ .

A stock is overfished when the total stock biomass (TSB) is less than  $B_{msy}$  (estimated to be 49,000 mt).

SFA: **Yellowtail Flounder (Southern New England)** - Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.23). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of  $F_{msy}$ .

A stock is overfished when the total stock biomass (TSB) is less than  $B_{msy}$  (estimated to be 51,000 mt).

SFA: Yellowtail Flounder (Middle Atlantic) - Overfishing occurs when F exceeds  $F_{msy}$  (estimated by proxy to be a relative exploitation index [catch/survey biomass] of 0.36). The target fishing mortality for the stock is 60% of  $F_{threshold}$ .

A stock is overfished when the total stock biomass (TSB) is less than the survey proxy for  $B_{msy}$  (9.15 kg/tow from the NMFS Autumn survey).

**Yellowtail Flounder (Cape Cod)** – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds F<sub>msy</sub> (estimated by proxy to be a relative exploitation index

[catch/survey biomass] of 0.17). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of  $F_{msv}$ .

A stock is overfished when the total stock biomass (TSB) is less than  $B_{msv}$  (14,000 mt).

American Plaice – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.18). The target fishing mortality for the stock is 60% of  $F_{0.1}$  proxy (F=0.11).

A stock is overfished when the spawning stock biomass (SSB) is less than  $B_{msy}$  (as defined by SSB/R at  $F_{0.1}$ , estimated to be 40,000 mt).

**Redfish** - The overfishing definition was fully approved under SFA guidelines, however, it was not used to make the assessments contained in this report because peer reviewed assessments were not available under the new definition. The overfishing definition approved under pre-SFA guidelines was used to make the assessments contained in this report. This definition contains only a fishing morality rate (F) component.

Pre-SFA: Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

SFA: Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.116). The target fishing mortality for the stock is 60% of  $F_{20\%}$ .

A stock is overfished when the spawning stock biomass (SSB) is less than  $B_{msy}$  (estimated to be 121,000 mt).

Witch Flounder – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.14). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of  $F_{msy}$ .

A stock is overfished when the total stock biomass (TSB) is less than  $B_{msy}$  (estimated to be 21,000 mt).

White Hake – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.25). The target fishing mortality for the stock is the lower 80<sup>th</sup> percentile of  $F_{msy}$ .

A stock is overfished when the total stock biomass (TSB) is less than  $B_{msy}$  (estimated to be 22,000 mt).

**Pollock** – The overfishing definition was fully approved under SFA guidelines, however, it was not used to make the assessments contained in this report because peer reviewed assessments were not available under the new definition. The overfishing definition approved under pre-SFA guidelines was used to make the assessments contained in this report. This definition contains only a fishing morality rate (F) component.

Pre-SFA: Overfishing occurs when the fishing mortality rate exceeds the rate associated with 20% MSP.

SFA: Overfishing occurs when F exceeds  $F_{msy}$  (estimated to be F=0.65). The target fishing mortality for the stock is the lower 75<sup>th</sup> percentile of  $F_{20\%}$ .

A stock is overfished when the spawning stock biomass (SSB) is less than  $B_{msy}$  (estimated to be 102,000 mt).

**Windowpane Flounder (Gulf of Maine / George Bank)** – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{msy}$  (estimated by proxy to be a relative exploitation index [catch/survey biomass] of 1.11). The target fishing mortality for the stock is 60% of  $F_{threshold}$ .

A stock is overfished when the total stock biomass (TSB) is less than the survey proxy for  $B_{msy}$  (0.94 kg/tow from the NMFS Autumn survey).

**Windowpane Flounder (Southern New England / Middle Atlantic)** – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{msy}$  (estimated by proxy to be a relative exploitation index [catch/survey biomass] of 2.24). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of the  $F_{msy}$  proxy.

A stock is overfished when the total stock biomass (TSB) is less than the survey proxy for  $B_{msy}$  (0.41 kg/tow from the NMFS survey).

**Winter Flounder (Gulf of Maine)** - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing morality rate (F) component.

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

**Winter Flounder (Georges Bank)** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{MSY}$  (estimated by proxy to be a relative exploitation index [catch/survey biomass] of 0.98). The target fishing mortality for the stock is 75% of  $F_{MSY}$ .

A stock is overfished when the total stock biomass (TSB) is less than the survey proxy for  $B_{MSY}$  (2.74 kg/tow from the NMFS Autumn survey).

**Winter Flounder (Southern New England)** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{MSY}$  (estimated to be F = 0.32). The target fishing mortality for the stock is the lower  $80^{th}$  percentile of  $F_{MSY}$ .

A stock is overfished when the total stock biomass (TSB) is less than the survey proxy for  $B_{MSY}$  (estimated to be 25,800 mt).

Silver Hake (Gulf of Maine / Northern Georges Bank, Southern Georges Bank / Middle Atlantic) - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{threshold}$ . The  $F_{threshold}$  is less than or equal to the fishing mortality rate that can produce maximum sustainable yield  $(F_{MSY})$  and varies with stock size based on whether the biomass is above or below (and how far below  $B_{MSY}$ ).  $F_{0.1}$  (0.41 for Gulf of Maine / Northern Georges Bank Silver Hake, and 0.39 for Southern Georges Bank / Middle Atlantic Silver Hake) is used as a proxy for  $F_{MSY}$  and the target fishing mortality rates are 0.36 and 0.34 for the northern and southern stocks respectively.

A stock is overfished when the biomass is less than that which can produce maximum sustainable yield ( $B_{MSY}$ ) on a continuing basis. The stratified mean NEFSC survey weight per tow during 1973-1982 is used as a biomass target until estimates of  $B_{MSY}$  are available.

**Offshore Hake** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{threshold}$ . The  $F_{threshold}$  is less than or equal to the fishing mortality rate that can produce maximum sustainable yield ( $F_{MSY}$ ) and varies with stock size based on whether the biomass is above or below (and how far below  $B_{MSY}$ ).  $F_{threshold}$  is currently not defined for this stock.

A stock is overfished when the 3 year moving average weight per individual in the autumn survey falls below the 25<sup>th</sup> percentile of the average weight per individual from the autumn survey time series 1963-1997 (0.236) and when the 3 year moving average of the abundance of immature fish less than 30 cm falls below the median value of the 1963-1997 autumn survey abundance of fish less than 30 cm (0.33).

**Red Hake (Southern Georges Bank / Middle Atlantic)** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{threshold}$ . The  $F_{threshold}$  is less than or equal to the fishing mortality rate that can produce maximum sustainable yield  $(F_{MSY})$  and varies with stock size based on whether the biomass is above or below (and how far below  $B_{MSY}$ ). Currently, no  $F_{threshold}$  is defined.

A stock is overfished when the 3 year moving average weight per individual in the autumn survey falls below the 25<sup>th</sup> percentile of the average weight per individual from the autumn survey time series 1963-1997 (0.12) and when the 3 year moving average of the abundance of immature fish less than 25 cm falls below the median value of the 1963-1997 autumn survey abundance of fish less than 25 cm (4.72).

**Red Hake (Gulf of Maine / Northern Georges Bank)** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{threshold}$ . The  $F_{threshold}$  is less than or equal to the fishing mortality rate that can produce maximum sustainable yield  $(F_{MSY})$  and varies with stock size based on whether the biomass is above or below (and how far below  $B_{MSY}$ ). The fishing mortality threshold  $F_{MSY}$  is 0.65 when the fall survey index is greater than 3.1 kg/tow  $(B_{MSY})$  proxy) and decreases linearly to zero at 1.6 kg/tow  $(\frac{1}{2}B_{MSY})$  proxy). Target F is 60% of the  $F_{MSY}$  proxy ( $F_{MSY}$  = 0.39) when the fall survey index is greater than 3.1 kg/tow and decreases linearly to zero at 1.6 kg/tow.

A stock is overfished when the biomass is less than that which can produce maximum sustainable

yield ( $B_{MSY}$ ) on a continuing basis. The stratified mean NEFSC survey weight per tow during 1973-1982 is used as a biomass target until estimates of  $B_{MSY}$  are available. Current proxy for  $B_{MSY}$  is 2,000 mt.

Ocean Pout – The overfishing definition was fully approved under SFA guidelines, however, it was not used to make the assessments contained in this report because peer reviewed assessments were not available under the new definition. The overfishing definition approved under pre-SFA guidelines was used to make the assessments contained in this report. This definition contains only a stock biomass (B) component.

Pre-SFA: 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.

SFA: Overfishing occurs when F exceeds  $F_{msy}$  (estimated by proxy to be a relative exploitation index [catch/survey biomass] of 0.31). The target fishing mortality for the stock is 60% of the  $F_{msy}$ .

A stock is overfished when the total stock biomass (TSB) is less than the survey proxy for  $B_{msy}$  (4.9 kg/tow for the NMFS survey).

**Atlantic Halibut** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{MSY}$  (0.06). Maximum rebuilding time is undefined for this stock. No fishing mortality is permitted (F = 0) until the stock is rebuilt (provisional control law).

A stock is overfished when the total stock biomass (TSB) is less than  $B_{MSY}$  (5,400 mt).

<u>Monkfish</u> – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds  $F_{threshold}$  (estimated to be F=0.051 for the North and F=0.217 for the South).

A stock is overfished when the survey index is less than  $B_{threshold}$  (1.45 kg/tow for the North and 0.75 kg/tow for the South).

Summer Flounder, Scup, and Black Sea Bass

Scup - The following overfishing definition has been fully approved under SFA guidelines and

was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds the threshold  $F_{msy}$  ( $F_{max}$  is used as a proxy, set at 0.26).

A stock is overfished when the minimum biomass index for rebuilding is less than B<sub>threshold</sub>, which is the maximum value of a 3-year moving average of the Northeast Fisheries Science Center's spring survey catch per tow of spawning stock biomass (SSB) (2.77 kg/tow, the average of 1977-1979).

**Summer Flounder** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds the threshold of  $F_{msy}(F_{max})$  is used as a proxy, set at 0.24).

A stock is overfished when total biomass falls below the minimum biomass threshold of  ${}^{1}\!\!/_{2}B_{msy}$ . Since the biomass target ( $B_{msy}$ ) cannot be estimated, biomass per recruit at  $F_{max}$  (3.7754 kg/recruit), times an average recruitment during 1982-1996 (40.6 million fish), is used for a  $B_{msy}$  proxy.

**Black Sea Bass** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds the threshold  $F_{msy}$  ( $F_{max}$  is used as a proxy, set at 0.32).

A stock is overfished when the minimum biomass index for rebuilding is less than  $B_{threshold}$ , which is the maximum value of a 3-year moving average of the Northeast Fisheries Science Center's spring survey catch per tow of spawning stock biomass (SSB) (0.9 kg/tow, the average of 1977-1979).

<u>Bluefish</u> (except Gulf of Mexico) - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when F exceeds the threshold  $F_{MSY}$  (F = 0.4).

A stock is overfished when the minimum biomass is less than  $\frac{1}{2}B_{MSY}$  (53,750 mt).

#### Surf Clams and Ocean Quahogs

**Surf Clam** - The overfishing definition was disapproved under SFA guidelines. The following

overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing morality rate (F) component.

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

**Ocean Quahog** – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when the overfishing target is exceeded, which is  $\frac{1}{2}$  the virgin biomass and  $F_{0.1}$  of F for the exploited region.

A stock is overfished when the minimum biomass is less than ½B<sub>msv</sub> or ¼ of the virgin biomass.

#### Atlantic Mackerel, Squid, and Butterfish

**Illex Squid** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when the catch associated with a target F of  $F_{msy}$  is exceeded. Annual quotas are set equal to 75% of  $F_{msy}$  (0.56).

A stock is overfished when the minimum biomass is less than ½B<sub>msv</sub>.

**Loligo Squid** - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when the catch associated with a threshold F of  $F_{max}$  is exceeded ( $F_{max}$  is a proxy for  $F_{msy}$ ). When the biomass is greater than 80,000 mt, annual quotas are set to correspond to a target F of 75% of  $F_{max}$ . The quota declines linearly to zero at 40,000 mt ( $\frac{1}{2}B_{msy}$ ).

A stock is overfished when the minimum biomass is less than ½B<sub>msv</sub>.

**Atlantic Mackerel** – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when the catch associated with a target F exceeds the threshold  $F_{msv}$  (0.45).

A stock is overfished when the SSB is less than 890,000 mt.

**Butterfish** (Atlantic) – The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing occurs when the catch associated with a target F of  $F_{msy}$  is exceeded. Annual quotas are set equal to 75% of  $F_{msy}$ .

A stock is overfished when the minimum biomass is less than ½B<sub>msv</sub>.

<u>Golden Crab of the South Atlantic</u> - The following overfishing definition was partially approved under SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

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.

<u>Shrimp Fishery of the South Atlantic</u> - The following overfishing definitions were partially approved under SFA guidelines and were used to make the assessments contained in this report. For White Shrimp the definition contains only a biomass (B) component, and for Rock Shrimp, Brown Shrimp, and Pink Shrimp the definition contains only a fishing mortality rate (F) component.

White Shrimp – The South Atlantic white shrimp resource is overfished 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.

**Rock Shrimp** – Overfishing occurs when the annual landings exceed the value which is two standard deviations above mean landings for the period 1986-1994.

**Brown Shrimp** and **Pink Shrimp** – Overfishing occurs when annual landings fall below two standard deviations below mean landings for the period 1957-1993 for 3 consecutive years.

<u>South Atlantic Snapper-Grouper</u> - The following overfishing definition was partially approved under SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

**Jewfish, Nassau Grouper** - Overfishing is defined as a fishing mortality rate (F) in excess of the fishing mortality rate at 40% Static SPR (F40% Static SPR), which is the MSY proxy for jewfish and Nassau grouper. The threshold level is defined as 30% Static SPR.

Vermilion Snapper, Red Porgy, Gag Grouper, Red Snapper, Speckled Hind, Snowy Grouper, Warsaw Grouper, Golden Tilefish, Black Sea Bass, Yellowtail Snapper, Red Grouper, Black Grouper, Wreckfish, Scamp, White Grunt, Greater Amberjack, Mutton Snapper, Gray (Mangrove) Snapper, Lane Snapper, Gray Triggerfish, Queen Triggerfish, Ocean Triggerfish, Yellow Jack, Blue Runner, Crevalle Jack, Bar Jack, 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, Schoolmaster, Blackfin Snapper, Cubera Snapper, Mahogany Snapper, Dog Snapper, Silk Snapper, Blueline Tilefish, Sand Tilefish, Bank Sea Bass, Rock Sea Bass, Rock Hind, Graysby, Yellowedge Grouper, Coney, Red Hind, Misty Grouper, Yellowmouth Grouper, Tiger Grouper, Yellowfin Grouper, Sheepshead, Grass Porgy, Jolthead Porgy, Saucereye Porgy, Whitebone Porgy, Knobbed Porgy, Longspine Porgy, Scup - Overfishing is defined as a fishing mortality rate (F) in excess of the fishing mortality rate at 30% Static SPR (F30% Static SPR), which is the snapper-grouper MSY proxy. The threshold level is defined as 10% Static SPR.

<u>Atlantic Coast Red Drum</u> - The following overfishing definition was partially approved under SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

Overfishing is defined as a fishing mortality rate (F) in excess of the fishing mortality rate at 30% Static SPR (F30% Static SPR), which is the red drum MSY proxy. The threshold level is defined as 10% Static SPR.

<u>Coral, Coral Reefs, and Live / Hard Bottom Habitats of the South Atlantic Region</u> - The following overfishing definition was partially approved under SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

**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 specified by the South Atlantic Council each year.

<u>Stone Crab Fishery of the Gulf of Mexico</u> - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a biomass (B) component.

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 prodopus) that assures survival of the crabs to achieve 70% egg production per recruit potential.

<u>Shrimp Fishery of the Gulf of Mexico</u> - The overfishing definitions were disapproved under SFA guidelines. The following overfishing definitions were approved under pre-SFA guidelines and were used to make the assessments contained in this report. The definitions for Brown Shrimp, Pink Shrimp, and White Shrimp contain only a biomass (B) component, and the definition for Royal Red Shrimp contains only a fishing morality rate (F) component.

**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.

<u>Coral and Coral Reefs of the Gulf of Mexico</u> - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing morality rate (F) component.

**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 - The following overfishing

definition was partially approved under SFA guidelines and was used to make the assessments contained in this report. This definition contains only a biomass (B) component.

**Spiny Lobster** - Overfishing can only be defined in terms of the fishing mortality component given the data-poor status of these species. The overfishing level is set as a fishing mortality rate (F) in excess of the fishing mortality rate at 20% Static SPR (F20% Static SPR).

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

<u>Coastal Migratory Pelagics of the South Atlantic and Gulf of Mexico</u> - The following overfishing definition was partially approved under SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

Gulf and Atlantic group King Mackerel, Gulf and Atlantic group Spanish Mackerel, Cobia, Cero, Dolphin, Little Tunny, Bluefish (Gulf of Mexico only) - Overfishing occurs when the fishing mortality rate (F) is in excess of the F at 30% Static SPR (F30% Static SPR), which is the coastal migratory pelagics MSY proxy.

Reef Fish of the Gulf of Mexico - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

Red Snapper, Nassau Grouper, Jewfish, Vermilion Snapper, Gag Grouper, Greater Amberjack, Gray Triggerfish, Lesser Amberjack, Almaco Jack, Banded Rudderfish, Tomtate, Pigfish, 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, Rock Hind, Speckled Hind, Yellowedge Grouper, Red Hind, Red Grouper, Misty Grouper, Warsaw Grouper, Snowy Grouper, Black Grouper, Yellowmouth Grouper, Scamp, Yellowfin Grouper, Grass Porgy, Jolthead Porgy, Hogfish, Dwarf Sand Perch, Sand Perch - 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) - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

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.

<u>Spiny Lobster</u> (Caribbean) - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

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 - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

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, Foureye 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, Tobaccofish, 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 - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

**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.

<u>Corals and Reef Associated Invertebrates of Puerto Rico and the U.S. Virgin Islands</u> - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

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 - 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.

Green Algae, Red Algae, Seagrasses - No overfishing definition exists in the FMP.

<u>Washington, Oregon, and California Salmon</u> - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a biomass (B) component.

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 - 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 that is first reduced to its annual specified goal level by the fisheries. Such a stock could be the weakest stock or an abundant stock that is heavily impacted by ocean salmon fisheries.

**Steelhead** - No overfishing definition exists in the FMP.

<u>Coastal Pelagics Species</u> - The following overfishing definition has been fully approved for Pacific (Chub) Mackerel and Pacific Sardine under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component. For Jack Mackerel, Northern Anchovy, and Market Squid, the following overfishing definition was partially approved under SFA guidelines and was used to make the assessments contained in this report. This definition contains only a fishing mortality rate (F) component.

**Pacific (Chub) Mackerel, Pacific Sardine** - Overfishing occurs when fishing occurs over a period of 1 year or more at a rate that is high enough to jeopardize the capacity of the stock to produce MSY on a continuing basis if applied in the long term. In operational terms, overfishing occurs whenever catch exceeds ABC, which is the annual value of the MSY control rule adopted for sardine.

**Jack Mackerel, Northern Anchovy, Market Squid** - Overfishing occurs when fishing occurs over a period of 1 year or more at a rate that is high enough to jeopardize the capacity of the stock to produce MSY on a continuing basis if applied in the long term. In operational terms, overfishing occurs whenever catch exceeds ABC, which is set at 25% of estimated MSY. In the case of market squid, there is no estimate of MSY at present.

**Pacific (Chub) Mackerel, Pacific Sardine -** A stock is overfished when the biomass level is low enough to jeopardize the capacity of the stock to produce MSY on a continuing basis. For Pacific (Chub) Mackerel, the stock is overfished if the stock biomass is 18,200 mt or less. For Pacific Sardine, the stock is overfished if the 1+ stock biomass on July 1 is 50,000 mt or less.

**Jack Mackerel, Northern Anchovy, Market Squid** - There is currently no threshold level of stock biomass defining "overfished" for these species.

<u>Washington, Oregon, and California Groundfish</u> - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Lingcod, Pacific Ocean Perch, Bocaccio, Bank Rockfish, Darkblotched Rockfish, Silvergrey

Rockfish, Canary Rockfish, Shortspine Thornyhead, Yellowtail Rockfish, Pacific Whiting, Sablefish, Dover Sole, English Sole, Petrale Sole, Chilipepper Rockfish, Shortbelly Rockfish, Longspine Thornyhead, Widow Rockfish, Cowcod, Pacific Cod, Arrowtooth Flounder, Butter Sole, Curlfin Sole, Flathead Sole, Pacific Sanddab, Rex Sole, Rock Sole, Sand Sole, Starry Flounder, Aurora Rockfish, Black Rockfish, Black-and-Yellow Rockfish, Blackgill Rockfish, Blue Rockfish, Bronzespotted Rockfish, Brown Rockfish, Calico Rockfish, China Rockfish, Copper 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, Rougheye Rockfish, Sharpchin Rockfish, Shortraker Rockfish, Speckled Rockfish, Splitnose Rockfish, Squarespot Rockfish, Starry Rockfish, Stripetail Rockfish, Tiger Rockfish, Vermilion Rockfish, Yelloweve Rockfish, Yellowmouth Rockfish, Leopard Shark, Soupfin Shark, Spiny Dogfish, Big Skate. California Skate, Longnose Skate, Ratfish, Finescale Codling, Pacific Rattail, Cabezon, Kelp Greenling, California Scorpionfish, Treefish – Overfishing occurs when the fishing mortality rate needed to produce the maximum sustainable yield  $(F_{MSY})$  is exceeded.

A stock is overfished when the stock falls below 25% of its unfished biomass ( $B_{25\%}$ ).

Overfishing and overfished parameters cannot be estimated for all species because of the wide range of knowledge available for the species managed under the PCGFMP. 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 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.

<u>Crustaceans of the Western Pacific</u> - The overfishing definitions were disapproved under SFA guidelines. The following overfishing definitions were approved under pre-SFA guidelines and were used to make the assessments contained in this report. These definitions contain only a biomass (B) component.

**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.

**Kona Crab** - No overfishing definition exists in the FMP.

<u>Precious Corals of the Western Pacific</u> - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report.

The definition contains both a fishing mortality rate (F) and biomass (B) component.

Pink Corals, Gold Corals, Bamboo Corals, Black Corals – Overfishing is defined as a fishing mortality rate that exceeds the maximum fishing mortality rate threshold (F = 0.066). No known harvesting of precious corals has occurred in the U.S. EEZ for the past 20 years.

A stock is overfished when the total spawning biomass is less than or equal to 20% of its unfished condition (SPR < 20%), based on cohort analysis of the pink coral.

<u>Bottomfish and Seamount Groundfish of the Western Pacific</u> - The overfishing definitions was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and were used to make the assessments contained in this report. These definitions contain only a biomass (B) component.

Pelagic Armorhead, Seabass (Main Hawaiian Islands), Squirrelfish Snapper (Northwest and Main Hawaiian Islands), Longtail Snapper (Northwest and Main 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<sub>1</sub>) to the spawning stock biomass per recruit that would occur in the absence of fishing (SSBR<sub>1</sub>)), is equal to or less than .20.

<u>Pelagic Fisheries of the Western Pacific</u> - The overfishing definitions were disapproved under SFA guidelines. The following overfishing definitions were approved under pre-SFA guidelines and were used to make the assessments contained in this report. These definitions contain only a biomass (B) component.

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), Pomfret, 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.

<u>Gulf of Alaska Groundfish</u> - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Western / Central Walleye Pollock, Eastern Walleye Pollock, Pacific Cod, Sablefish, Shortspine Thornyhead, Arrowtooth Flounder, Western Pacific Ocean Perch, Central Pacific Ocean Perch, Eastern Pacific Ocean Perch, Atka Mackerel, Alaska Plaice, Butter Sole, Deepsea Sole, Dover Sole, English Sole, Flathead Sole, Greenland Turbot, Rex Sole, Northern Rock Sole, Southern Rock Sole, Sand Sole, Starry Flounder, Yellowfin Sole, Dusky Rockfish, Yelloweye Rockfish, Aurora Rockfish, Blackgill Rockfish, Bocaccio, Chilipepper, Darkblotched Rockfish, Greenstriped Rockfish, Harlequin Rockfish, Northern Rockfish, Pygmy Rockfish, Redbanded Rockfish, Redstripe Rockfish, Rougheye Rockfish, Sharpchin Rockfish, Shortbelly Rockfish, Shortraker Rockfish, Silvergrey Rockfish, Splitnose Rockfish, Stripetail Rockfish, Vermilion Rockfish, Yellowmouth Rockfish, C-O Sole, Curlfin Sole, Hybrid Sole, Longhead Dab, Pacific Sanddab, Petrale Sole, Roughscale Sole, Slender Sole, Bering Flounder, Kamchatka Flounder, Black Rockfish, Blue Rockfish, Widow Rockfish, Yellowtail Rockfish, Canary Rockfish, China Rockfish, Copper Rockfish, Quillback Rockfish, Rosethorn Rockfish, Tiger Rockfish, Broad Banded Thornyhead, Longspine Thornyhead, Blue Shark, Brown Cat Shark, Pacific Sleeper Shark, Salmon Shark, Sixgill Shark, Spiny Dogfish Shark, Alaska Skate, Aleutian Skate, Big Skate, Flathead Skate, Longnose Skate, Roughtail Skate, Sandpaper Skate, Starry Skate, Armorhead Sculpin, Bigmouth Sculpin, Blackfin Sculpin, Dusky Sculpin, Great Sculpin, Red Irish Lord, Ribbed Sculpin, Roughspine Sculpin, Spinyhead Sculpin, Tadpole Sculpin, Thorny Sculpin, Yellow Irish Lord, Octopus Octopus Octopus Opisthoteuthis california, Squid Berryteuthis magister, Squid Onychoteuthis borealijaponicus, Capelin, Eulachon, Rainbow Smelt - Overfishing is defined as any amount of fishing in excess of the maximum fishing mortality threshold (MFMT). This MFMT 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 tiers 1-2, if a reliable pdf of B<sub>MSY</sub> is available, the preferred point estimate of B<sub>MSY</sub> is the geometric mean of its pdf. For tiers 1-5, if a reliable pdf of B is available, the preferred point estimate is the geometric mean of its pdf. 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  $F=F_{40\%}$ .

A stock is overfished when it falls below its minimum stock size threshold (MSST), defined as whichever of the following is greater:  $\frac{1}{2}$  the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT. The MSY level is interpreted as  $B_{MSY}$  in Tiers 1-2 and  $B_{35\%}$  in Tier 3. No MSY level, and therefore no MSST, can be specified for Tiers 4-6.

<u>Alaska Salmon</u> - The overfishing definition was disapproved under SFA guidelines. The following overfishing definition was approved under pre-SFA guidelines and was used to make the assessments contained in this report. This definition contains only a biomass (B) component.

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 - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Eastern Bering Sea Walleye Pollock, Aleutian Islands Walleye Pollock, Bogoslof Walleye Pollock, Pacific Cod, Yellowfin Sole, Greenland Turbot, Arrowtooth Flounder, Rock Sole, Flathead Sole, Eastern Bering Sea Sablefish, Aleutian Islands Sablefish, Eastern Bering Sea Pacific Ocean Perch, Aleutian Islands Pacific Ocean Perch, Atka Mackerel, Alaska Plaice, Eastern Bering Sea Northern Rockfish, Aleutian Islands Northern Rockfish, Eastern Bering Sea Sharpchin Rockfish, Aleutian Islands Sharpchin Rockfish, Eastern Bering Sea Shortraker Rockfish, Aleutian Islands Shortraker Rockfish, Eastern Bering Sea Rougheye Rockfish, Aleutian Islands Rougheye Rockfish, Squid Berryteuthis magister, Squid Onychoteuthis borealijaponicus, Longspine Thornyhead, Shortspine Thornyhead, Bering Flounder, Kamchatka Flounder, Arctic Flounder, Butter Sole, C-O Sole, California Tonguefish, Curlfin Sole, Deepsea Sole, Dover Sole, English Sole, Hybrid Sole, Longhead Dab, Pacific Sanddab, Petrale Sole, Rex Sole, Roughscale Sole, Sand Sole, Slender Sole, Starry Flounder, Aurora Rockfish, Black Rockfish, Blackgill Rockfish, Blue Rockfish, Bocaccio, Brown Rockfish, Canary Rockfish, Chameleon Rockfish, Chilipepper, Copper Rockfish, Darkblotched Rockfish, Dusky Rockfish, Gray Rockfish, Greenstriped Rockfish, Harlequin Rockfish, Pink Rose Rockfish, Pygmy Rockfish, Redbanded Rockfish, Redstripe

Rockfish, Rosethorn Rockfish, Rosy Rockfish, Silvergrey Rockfish, Splitnose Rockfish, Stripetail Rockfish, Tiger Rockfish, Vermilion Rockfish, Widow Rockfish, Yelloweye Rockfish, Yellowmouth Rockfish, Yellowtail Rockfish, Broad Banded Thornyhead, Antlered Sculpin, Armorhead Sculpin, Bigmouth Sculpin, Blackfin Sculpin, Blob Sculpin, Brown Irish Lord, Butterfly Sculpin, Calico Sculpin, Crested Sculpin, Dusky Sculpin, Great Sculpin, Pacific Staghorn Sculpin, Plain Sculpin, Red Irish Lord, Ribbed Sculpin, Scissortail Sculpin, Shorthorn Sculpin, Spinyhead Sculpin, Tadpole Sculpin, Thorny Sculpin, Warty Sculpin, Yellow Irish Lord, Alaska Skate, Aleutian Skate, Big Skate, Commander Skate, Deepsea Skate, Golden Skate, Longnose Skate, Mud Skate, Okhotsk Skate, Roughtail Skate, Sandpiper Skate, Starry Skate, White-Blotched Skate, Whitebrow Skate, Blue Shark, Pacific Sleeper Shark, Salmon Shark, Sixgill Shark, Soupfin Shark, Spiny Dogfish Shark, Capelin, Eulachon, Rainbow Smelt, Octopus Octopus dofleini, Octopus Opisthoteuthis california) - Overfishing is defined as any amount of fishing in excess of the maximum fishing mortality threshold (MFMT). This MFMT 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 1-2, if a reliable pdf of B<sub>MSY</sub> is available, the preferred point estimate of B<sub>MSY</sub> is the geometric mean of its pdf. For Tiers 1-5, if a reliable pdf of B is available, the preferred point estimate is the geometric mean of its pdf. For Tiers 1-3, the coefficient  $\alpha$  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<sub>40%</sub>.

A stock is overfished when it falls below its minimum stock size threshold (MSST), defined as whichever of the following is greater:  $\frac{1}{2}$  the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT. The MSY level is interpreted as  $B_{MSY}$  in Tiers 1-2 and  $B_{35\%}$  in Tier 3. No MSY level, and therefore no MSST, can be specified for Tiers 4-6.

<u>Bering Sea / Aleutian Islands King and Tanner Crabs</u> - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Blue King Crab (Pribilof Islands, Saint Matthew Island, Saint Lawrence Island), Golden King Crab (Aleutian Islands, Pribilof Islands, Northern District), Red King Crab (Bristol Bay, Norton Sound, Pribilof Islands, Aleutian Islands), Aleutian Islands Scarlet King Crab,

Bering Sea Snow Crab, Tanner Crab [Bering Sea, Bering Sea Triangle, Bering Sea Grooved, Eastern Aleutian Islands, Eastern Aleutian Islands Triangle, Eastern Aleutian Islands Grooved, Adak (Western Aleutians), Western Aleutian Islands Grooved] - Overfishing is defined as any rate of fishing mortality in excess of M, where M=0.2 for all species of king crab and M=0.3 for all *Chionoecetes* species.

A stock is overfished when it falls below the minimum stock size threshold (MSST), which is equal to ½ the MSY stock size. MSY stock size equals the average mature biomass observed over the past 15 years, from 1983-1997.

<u>Alaska Scallop</u> - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Overfishing is defined as level of fishing mortality that jeopardizes the long-term capacity of a stock or stock complex to produce MSY on a continuing basis. Overfishing is established as a fishing rate in excess of the natural mortality rate (M). The MSY control rule is based on natural mortality, using the estimate of M = 0.13, the MSY control rule is  $F_{MSY} = M$ . Hence,  $F_{overfishing} \ge M = 0.13$  (6% is used as a proxy for F).

A stock is overfished when it falls below the minimum stock size threshold (MSST), which is equal to  $\frac{1}{2}$  MSY stock size = 4.76 million pounds.

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.

<u>Atlantic Billfishes</u> - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Blue Marlin (North Atlantic), White Marlin (North Atlantic), Sailfish (West Atlantic), Spearfish (West Atlantic) – Overfishing occurs when the MFMT exceeds  $F_{MSY}$ . The relative fishing mortality rates are as follows: Blue Marlin (North Atlantic) ( $F_{1995}/F_{MSY}=1.21$ ), White Marlin (North Atlantic) ( $F_{1995}/F_{MSY}=2.37$ ), and Sailfish ( $F_{1995}/F_{MSY}=1.4$ ).

A stock is overfished when the stock biomass level falls below the MSST, which is set at (1-M)B<sub>MSY</sub>, where M is the instantaneous natural mortality rate. The relative biomass levels are as follows: Blue Marlin (North Atlantic) (B<sub>1996</sub>/B<sub>MSY</sub> = 0.608), White Marlin (North Atlantic) (B<sub>1996</sub>/B<sub>MSY</sub> = 0.321), and Sailfish / Spearfish (West Atlantic) (B<sub>1992/96</sub>/B<sub>MSY</sub> = 0.62).

<u>Atlantic Tunas, Swordfish, and Sharks</u> - The following overfishing definition has been fully approved under SFA guidelines and was used to make the assessments contained in this report. The definition contains both a fishing mortality rate (F) and biomass (B) component.

Bigeye Tuna (Atlantic), Albacore (North Atlantic), Bluefin Tuna (West Atlantic), Swordfish (North Atlantic), 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, Yellowfin Tuna (West Atlantic), Atlantic Sharpnose Shark, Caribbean Sharpnose Shark, Finetooth Shark, Blacknose Shark, Smalltail Shark, Bonnethead Shark, Atlantic Angel Shark, Skipjack Tuna (West Atlantic), 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, Iceland Cat Shark, Smallfin Cat Shark, Deepwater Cat Shark, Broadgill Cat Shark, Marbled Cat Shark, Blotched Cat Shark, Chain Dogfish, Dwarf Catshark, Japanese Gulper Shark, Gulper Shark, Little Gulper Shark, Kitefin Shark, Flatnose Gulper Shark, Portuguese Shark, Greenland Shark, Lined Lanternshark, Broadband Dogfish, Caribbean Lanternshark, Great Lanternshark, Smooth Lanternshark, Fringefin Lanternshark, Green Lanternshark, Cookiecutter Shark, Bigtooth Cookiecutter, Smallmouth Velvet Dogfish, Pygmy Shark, Roughskin Spiny Dogfish, Blainville's Dogfish, Cuban Dogfish, Bramble Shark, American Sawshark, Florida Smoothhound, Smooth Dogfish - Overfishing occurs when the MFMT is exceeded, which is set at  $F_{limit} = F_{MSY}$ . The relative fishing mortality rates  $(F_{year}/F_{MSY})$  are as follows: North Atlantic Swordfish ( $F_{95} = 2.05 F_{MSY}$ ), South Atlantic Swordfish ( $F_{95} = 1.24 F_{MSY}$ ), West Atlantic Bluefin Tuna ( $F_{97}/F_{MSY}$  two-line = 1.73), Bigeye Tuna ( $F_{96}/F_{MSY}$  = 1.5 - 2.2), North Atlantic Albacore Tuna  $(F_{97}/F_{MSY} = 1.39 \text{ (uncertain)})$ , Yellowfin Tuna  $(F_{97}/F_{MSY} = \text{variable, probably exceeds } 1.0)$ , Blacktip Shark ( $F_{97}/F_{MSY} = 3.52$  (baseline)), Sandbar Shark ( $F_{97}/F_{MSY} = 2.70$  (baseline)), Large Coastal Sharks  $(F_{97}/F_{MSY} = 6.34 \text{ (baseline)})$ , and Small Coastal Sharks  $(F_{86-91}/F_{MSY} = 0.89)$ .

A stock is overfished when the stock level biomass falls below MSST, which is set at MSST =  $B_{limit} = (1\text{-M})B_{MSY}$  when M < 0.5; MSST =  $B_{limit} = 0.5B_{MSY}$  when  $M \ge 0.5$ . For Yellowfin Tuna, MSST =  $0.5B_{MSY}$ . The relative biomass levels are as follows:  $(B_{year}/B_{MSY})$  for North Atlantic Swordfish  $(B_{96}/B_{MSY} = 0.58)$ , South Atlantic Swordfish  $(B_{96}/B_{MSY} = 0.99)$ , West Atlantic Bluefin Tuna  $(SSB_{97}/SSB_{MSY}$  two-line = 0.48), Bigeye Tuna  $(B_{97}/B_{MSY} = 0.6\text{-}0.8)$ , North Atlantic Albacore Tuna  $(B_{97}/B_{MSY} = 0.47 \ (0.34\text{-}0.63))$ , Yellowfin Tuna  $(B_{97}/B_{MSY} = 0.92\text{-}1.35)$ , Blacktip Shark\*  $(N_{98}/N_{MSY} = 0.50 \ (baseline))$ , Sandbar Shark\*  $(N_{98}/N_{MSY} = 0.58 \ (baseline))$ , Large Coastal Sharks\*  $(N_{98}/N_{MSY} = 0.30 \ (baseline))$ , and Small Coastal Sharks  $(B_{91}/B_{MSY} = 1.12)$ .

\*N is the number of fish, rather than biomass or yield in weight.

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

<u>Pacific Halibut</u> - 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).

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

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

### **Atlantic Herring**

**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.

### Spiny Dogfish

**Spiny Dogfish** - The spiny dogfish stock is determined to be overfished when the mature female biomass (SSB) falls below  $\frac{1}{2}$  SSB<sub>max</sub> (where SSB<sub>max</sub> is the spawning stock biomass calculated to produce maximum recruitment based upon the Ricker S/R function), or overfishing of spiny dogfish is occurring when the fishing mortality rate (F) exceeds a rate that would produce an average of 1.0 pups-per-recruit.

# 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  $B_{MSY}$  and reliable pdf of  $F_{MSY}$ .

- 1a) Stock status:  $B/B_{MSY} > 1$ 
  - $F_{OFL} = \mu_A$ , the arithmetic mean of the pdf

 $F_{ABC} \le \mu_H$ , the harmonic mean of the pdf

1b) Stock status:  $\alpha < B/B_{MSY} \le 1$ 

$$F_{OFL} = \mu_A x (B/B_{MSY} - \alpha) / (1 - \alpha)$$

$$F_{ABC} \le \mu_H \times (B/B_{MSY} - \alpha) / (1 - \alpha)$$

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

$$F_{OFL} = 0$$

$$F_{ABC} = 0$$

2) Information available: Reliable point estimates of B,  $B_{MSY}$ ,  $F_{MSY}$ ,  $F_{35\%}$ , and  $F_{40\%}$ .

2a) Stock status:  $B/B_{MSY} > 1$ 

$$F_{OFL} = F_{MSY}$$

$$F_{ABC} \le F_{MSY} \times (F_{40\%}/F_{35\%})$$

2b) Stock status:  $\alpha < B/B_{MSY} \le 1$ 

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

$$F_{ABC} \le F_{MSY} \times (F_{40\%}/F_{35\%}) \times (B/B_{MSY} - \alpha) / (1 - \alpha)$$

2c) Stock status:  $B/B_{MSY} \le \alpha$ 

$$F_{OFL} = 0$$

$$F_{ABC} = 0$$

3) Information available: Reliable point estimates of B,  $B_{40\%}$ ,  $F_{35\%}$ , and  $F_{40\%}$ .

3a) Stock status:  $B/B_{40\%} > 1$ 

$$F_{OFL} = F_{35\%}$$

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

3b) Stock status: 
$$\alpha < B/B_{40\%} \le 1$$

$$F_{OFL} = F_{35\%} \times (B/B_{40\%} - \alpha) / (1 - \alpha)$$

$$F_{ABC} \leq F_{40\%} \ x \ (B/B_{40\%} \ \mbox{-} \ \alpha) \ / \ (1 \ \mbox{-} \ \alpha)$$

3c) Stock status:  $B/B_{40\%} \le \alpha$ 

$$F_{OFL}=0$$

$$F_{ABC} = 0$$

4) Information available: Reliable point estimates of B,  $F_{35\%}$ , and  $F_{40\%}$ .

$$F_{OFL} = F_{35\%}$$

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

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

$$F_{OFL} = M$$

$$F_{ABC} \leq 0.75 \ x \ M$$

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. ABC  $\leq 0.75\ x\ OFL$ 

### Appendix 5. Acronyms used in Appendices

 $\alpha$  - The threshold stock size .05.

<u>ABC</u> - 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).

<u>ASMFC</u> - 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.

<u>B</u> - The weight (biomass) of a group of fish.

 $\underline{\mathbf{B}}_{MSY}$  - The weight (biomass) of a group of fish necessary to produce MSY.

<u>CFMC</u> - Caribbean Fishery Management Council.

<u>CPUE</u> - 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.

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

<u>EPR</u> - 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.

 $\underline{F}$  - Fishing Mortality Rate - A measurement of the rate of removal of fish from a population by fishing. Fishing mortality rate can be reported as either annual or instantaneous. Annual mortality is the percentage of fish dying in one year. Instantaneous mortality is that percentage of fish dying at any one point in time.

 $\underline{F}_{ABC}$  - The level of fishing mortality that results in the allowable biological catch.

 $\underline{F}_{MAX}$  - The level of fishing mortality that results in the greatest yield from the fishery.

 $\underline{F}_{MSY}$  - The level of fishing mortality that results in the maximum sustainable yield.

 $\underline{F}_{OF}$  - The level of fishing mortality defined as overfishing.

 $\underline{F}_{OFL}$  - The level of fishing mortality associated with the average catch from 1978 through 1995 for

Gulf of Alaska Groundfish and Bering Sea / Aleutian Islands Groundfish.

 $\underline{F}_{20\%}$  - The level of fishing mortality that results in a spawning potential ratio of 20% of the maximum.

 $\underline{F}_{25\%}$  - The level of fishing mortality that results in a spawning potential ratio of 25% of the maximum.

 $\underline{F}_{30\%}$  - The level of fishing mortality that results in a spawning potential ratio of 30% of the maximum.

 $\underline{F}_{40\%}$  - The level of fishing mortality that results in a spawning potential ratio of 40% of the maximum.

 $\underline{F}_{0.1}$  - The point on the spawning per recruit curve at which the level of spawning per recruit is 35% of 40% of the maximum.

<u>FMP</u> - 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.

<u>GSMFC</u> - 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.

<u>HMS</u> - 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.

<u>MFMT</u> – Maximum Fishing Mortality Threshold – The level or rate of fishing mortality, that if exceeded, will result in overfishing and jeopardize the capacity of a stock or stock complex to produce MSY on a continuing basis.

MSP - Maximum Spawning Potential - See SPR.

MSST – Minimum Stock Size Threshold – The minimum size of the stock or stock complex that is required to produce MSY, below which the stock would be considered overfished. The threshold should equal whichever of the following is greater: ½ the MSY stock size, or the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10

years if the stock or stock were exploited at the maximum fishing mortality threshold.

<u>MSY</u> - 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.

 $\underline{OY}$  - 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.

<u>pdf</u> - Probability Density Function - A description of the probability that a variable takes a specified value.

PFMC - Pacific Fishery Management Council.

<u>SAFE</u> - 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.

<u>SPR</u> - 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.

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

<u>SSBR</u> - 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.

<u>SSC</u> - Scientific and Statistical Advisory Committee - A group of scientific and technical people

giving advice to a council.

<u>WPFMC</u> - Western Pacific Fishery Management Council.