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Executive Summary

The Magnuson-Stevens Fishery Conservation and Management Act requires that NOAA's National Marine Fisheries Service (NMFS) report annually to Congress and the Councils on the status of fisheries (Sec. 304(e)(1)). This report fulfills that requirement.

The information in this report was generated by the NMFS regional offices and science centers based on the most recent stock assessments. Status determinations are generally made during a formal review of a scientific stock assessment using the best available scientific information and status determination criteria specified in a fishery management plan.

Stocks discussed in this report are characterized under two categories: (1) subject to overfishing and (2) overfished. A stock that is subject to overfishing has a fishing mortality (harvest) rate above the level that provides for the maximum sustainable yield. A stock that is overfished has a biomass level below a biological threshold specified in its fishery management plan.

NMFS reviewed 530 individual stocks and stock complexes in 2006. Two hundred forty-two stocks or stock complexes have known overfishing determinations: 194 (80 percent) are not subject to overfishing and 48 (20 percent) are subject to overfishing. These percentages represent a slight change from last year's report, in which 81 percent were not subject to overfishing and 19 percent were subject to overfishing. One hundred eighty-seven stocks have known overfished determinations: 140 (75 percent) are not overfished and 47 (25 percent) are overfished. The percentages are unchanged relative to 2005. The specifics are outlined below.

The number of stocks subject to overfishing increased to 48 in 2006 from 45 in 2005. Three stocks were removed from the list and six were added. Specifically: Two stocks are no longer subject to overfishing—*Atlantic sea scallops* and *Gulf of Mexico vermilion snapper*. The status of the *Large Coastal Shark complex* is now unknown based on a 2006 stock assessment. Four stocks have become subject to overfishing—*winter skate*, *Gulf of Mexico gag*, *petrale sole*, and *yellowfin tuna (Eastern Pacific)*. Finally, two stocks of previously unknown status were found to be subject to overfishing—*Gulf of Mexico gray triggerfish* and *dusky shark*.

The number of overfished stocks has increased to 47 in 2006 from 43[1] in 2005. Two stocks were removed and six were added to the list. Specifically: The status of the *Large Coastal Shark complex* is now unknown based on a 2006 stock assessment. One stock is no longer overfished—*Gulf of Mexico vermilion snapper*. Four stocks have become overfished—*monkfish—north*, *monkfish—south*, *South Atlantic pink shrimp*, and *sandbar shark*. Finally, two stocks of previously unknown status were found to be overfished—*porbeagle shark* and *dusky shark*.

Management action associated with 4 stocks—*Bluefish (except Gulf of Mexico)*, *Gulf of Mexico vermilion snapper*, *South Atlantic tilefish*, and *South Atlantic gag*[2]—has resulted in rebuilding to levels of at least 80 percent of their maximum sustainable levels. Continued, sustainable management should allow these stocks to achieve optimal levels.

Since 2001, 13 stocks or complexes were removed from the overfishing list (one of which resorted to an unknown status) and 19 stocks or complexes have been added to the list, with 8 of these stocks previously of unknown status or not reported in 2001.

Since 2001, 27 stocks or complexes were removed from the overfished list (14 of which resorted to an unknown status) and 17 stocks or complexes have been added to the list, with 3 of these stocks previously of unknown status or not reported in 2001.

[1] For comparison purposes, the number of overfished stocks reported in 2005 (54) is reduced by 11 due to a re-evaluation of some previous overfished determinations. This change is explained in Appendix 1.

[2] Result is preliminary because the assessment is currently being reviewed.

Introduction

This report describes the state of our Nation's marine fisheries and the effectiveness of fisheries management under the Magnuson-Stevens Fishery Conservation and Management Act, Public Law 94-294 (MSA), as amended in 1996 by the Sustainable Fisheries Act (SFA) and again in 2007 by the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 (MSRA). The SFA emphasized the need to end overfishing, rebuild overfished stocks, and establish management plans designed to ensure biologically and economically sustainable fisheries; the MSRA set a firm deadline of 2010 for measures to be in place that end overfishing in the United States. A stock that is subject to overfishing has a fishing mortality (harvest) rate above the level that provides for the maximum sustainable yield. A stock that is overfished has a biomass level below its prescribed biological threshold.

Definitions

Overfishing – Harvest rate is above a prescribed fishing mortality threshold.

Overfished - Stock size is below a prescribed biomass threshold.

Approaching Overfished Condition - Based on trends in harvesting effort, fishery resource size, and other appropriate factors, it is estimated that the fishery will become overfished within 2 years.

B_{MSY} – The weight (biomass) of a group of fish necessary to produce MSY on a continuing basis.

F_{MSY} – A fishing mortality rate that, if applied constantly, would result in the maximum sustainable yield.

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

We continue to make progress in our scientific knowledge of marine fisheries and in our ability to use that knowledge to manage for the sustained use of these resources. This report fulfills the congressional requirement for an annual report on the status of fisheries within each Council's geographic area of authority and to identify fisheries that are overfished or approaching a condition of being overfished.

This report lists the managed marine fish stocks in the U.S. Exclusive Economic Zone,[3] including stocks that straddle international boundaries and highly migratory stocks. In response to the congressional requirement, the report categorizes stocks according to their status. The report answers four questions which help determine the effectiveness of management measures in meeting the provisions of the MSA:

1. *What stocks are subject to overfishing?*
2. *What stocks are overfished?*
3. *What stocks are approaching an overfished condition?*

[3] The U.S. Exclusive Economic Zone extends from 3 to 200 miles offshore and covers more than 2 million square miles.

4. *How do this year's determinations compare to previous years?*

Finally, this report discusses management action taken by the relevant Councils to address new overfishing and overfished determinations. In 2006, several stocks were added to the list of stocks subject to overfishing and stocks overfished (Table 1). NMFS, through its regional offices, is working closely with the relevant Councils to address these determinations and reverse downward trends.

Using the Best Available Data

To categorize marine fish stocks for this report, NMFS reviewed each stock relative to the status determination criteria (SDC) contained in the relevant fishery management plan (FMP).[4] Sometimes the SDC do not apply to an individual stock, but to a group of similar species harvested together or sharing a similar life history. These groups are referred to as stock complexes, units, or assemblages. Such groupings may be particularly useful when data are sparse or lacking, because they provide a level of protection for all related stocks and allow for data collection on them. In some cases, the status of a stock complex is determined using the SDC for one stock in the complex. In other cases, the SDC apply to the complex as a whole. Stock complexes are used in the Southeast, Pacific Islands, and Alaska Regions, as well as by the NMFS Atlantic Highly Migratory Species (HMS) division. This report includes the FMPs' stock complexes, rather than listing species individually.

Based on a review of the best scientific information available for each stock or stock complex, relative to its SDC, NMFS determined the overfishing and overfished condition, including whether the stock is approaching an overfished condition. NMFS used many resources to make these determinations, including final, peer-reviewed documents such as Stock Assessment Review Committee reports and recommendations of each Council's Scientific and Statistical Committee. For species not included in a federal FMP (i.e., species managed by international agreement), the stock status determination was made in accordance with the relevant FMP or agreement. More information on stock complexes and the methodology used to include them in this report can be found in Appendix 1 on the NMFS website.

A 2006 evaluation of overfished SDC found spawning potential ratio (SPR) was used to measure the overfished status for 21 stocks. SPR is inadequate for making overfished determinations and, as a result, the overfished status of these stocks was changed to unknown. Eleven of these stocks had been previously declared overfished. This change is fully described in Appendix 1.

[4] In order to use the best available data, some stocks use SDC specified in the most recent scientific assessment, rather than those contained in the FMPs. Alaska SDC are generally specified in the annual Stock Assessment and Fishery Evaluation (SAFE) Report, rather than in the FMP itself.

Summary of Stock Status Determination Changes

This year's report is based on assessments completed as of December 31, 2006. Results from fishery stock assessments in progress on that date will be summarized in next year's report. Results are updated quarterly and the most resent may be found at:
http://www.nmfs.noaa.gov/sfa/statusoffisheries/SOSmain.htm

Overview of overfishing status of stocks

- 242 stocks or stock complexes are known with respect to their overfishing status. Of these:
  - 194 (80 percent) stocks or stock complexes are not subject to overfishing.
  - 48 (20 percent) stocks or stock complexes are subject to overfishing (i.e., have a fishing mortality rate that exceeds the overfishing threshold).
- 288 stocks or stock complexes have overfishing thresholds not defined or applicable, or are unknown with respect to their overfishing status.

Changes in overfishing status

The following stocks had a change in overfishing status during 2006; stocks with previously unknown or undefined status are noted.

- In the Northeast Region –
  - *Atlantic Sea Scallop* is not subject to overfishing.
  - *Silver Hake–Southern Georges Bank/Middle Atlantic* is not subject to overfishing (was previously unknown).
  - *Winter Skate* is subject to overfishing.
- In the Southeast Region –
  - *Gulf of Mexico Vermilion Snapper* is not subject to overfishing.
  - *Gulf of Mexico Gray Triggerfish* is subject to overfishing (was previously listed as unknown).
  - *Gulf of Mexico Gag* is subject to overfishing.
- In the Southwest Region –
  - *Yellowfin Tuna–Eastern Pacific* is subject to overfishing.
- In the Northwest Region –
  - *Cabezon–South* is not subject to overfishing (was previously listed as unknown).
  - *Blackgill Rockfish* is not subject to overfishing (was previously listed as unknown).
  - *Petrale Sole* is subject to overfishing.
- In the Highly Migratory Species Division –
  - *Porbeagle shark* is not subject to overfishing (was previously listed as unknown).
  - *Dusky Shark* is subject to overfishing (was previously listed as unknown).
  - *Blacktip Shark* was previously assessed as a single stock and was not subject to overfishing. It is now assessed as two stocks; a *Gulf of Mexico* stock that is not subject to overfishing and an *Atlantic* stock whose overfishing status is unknown.

- The *Large Coastal Shark Complex* is unknown, based on results of the 2006 stock assessment (was previously subject to overfishing).

• There are no changes to the other regions.

Overview of overfished status

• 187 stocks or stock complexes are known with respect to their overfished status. Of these:

- 140 (75 percent) stocks or stock complexes are not overfished. This number includes 4 stocks that are not currently overfished, but are approaching an overfished condition.
- 47 (25 percent) stocks or stock complexes are overfished.

• 343 stocks or stock complexes have overfished thresholds not defined or applicable, or are unknown with respect to their overfished status.

Changes in overfished status

The following stocks had a change in overfished status in 2006; stocks with previously unknown or undefined status are noted.

• In the Northeast Region –

- *Monkfish–North* is overfished.
- *Monkfish–South* is overfished.

• In the Southeast Region –

- *Gulf of Mexico Vermilion Snapper* is not overfished.
- *South Atlantic Gag* is not overfished (was previously listed as unknown[5]).
- *South Atlantic Pink Shrimp* is overfished.
- Eleven stocks were removed from the overfished list due to an evaluation of the adequacy of their SDC to measure the overfished status of those stocks (see Appendix 1). Those stocks have been relisted as unknown and are: *SA Red Snapper, SA Red Grouper, SA Black Grouper, SA Speckled Hind, SA Warsaw Grouper, SA Red Drum, SA Nassau Grouper, SA Goliath Grouper,* and *GM Goliath Grouper* (now listed as a single SA/GM stock)*, GM Nassau Grouper,* and *GM Red Drum.*

• In the Northwest and Alaska Regions –

- *Pacific Halibut* is not overfished (was previously listed as undefined).

• In the Alaska Region –

- *Walleye Pollock–Aleutian Islands* is not overfished (was previously listed as unknown).

• In the Highly Migratory Species Division –

- *Sandbar Shark* is overfished.
- *Porbeagle Shark* is overfished (was previously listed as unknown).
- *Dusky Shark* is overfished (was previously listed as unknown).
- The *Large Coastal Shark Complex* is unknown, based on results of the 2006 stock assessment (was previously overfished).

[5] This stock is one of 21 stocks listed in 2005 using SPR for the overfished determination. The 2006 re-evaluation revised this stock's overfished listing from *no* to *unknown*. The stock was also assessed in 2006, and the result of that assessment indicate that the stock is *not overfished*, a change from the revised unknown determination.

- *Blacktip Shark* was previously assessed as a single stock and was not overfished. It is now assessed as two stocks; a *Gulf of Mexico* stock that is not overfished and an *Atlantic* stock whose overfished status is unknown.

- There are no changes to the other regions.

Approaching an overfished condition

The basis for determining whether a stock is approaching an overfished condition is an examination of the current stock biomass and trends in fishing effort. Unless the status of the stock is known, a determination about whether the stock will become overfished within 2 years cannot be made with any certainty. Therefore, the definition for the biomass threshold in the FMP, along with trends in fishing effort, should be the determining criteria in evaluating whether a stock is approaching an overfished condition. For Pacific salmon stocks, the determining criteria are based on maximum sustainable yield/maximum spawner potential objectives for natural stocks or stock complexes.

- In the Southeast Region –
  - *Caribbean Snapper Unit 1* is approaching an overfished condition.
  - *Caribbean Parrotfishes* is approaching an overfished condition.
- In the Northwest Region –
  - *Klamath River Fall (Klamath and Trinity Rivers) Chinook salmon* is approaching an overfished condition.
- In the Pacific Islands Region –
  - *The Bottomfish Multispecies Complex–Hawaiian Archipelago* is not approaching an overfished condition (was previously listed as unknown).

Tracking Changes

The status of all 530 stocks and stock complexes[6] is summarized in Table 2. A tabular summary of the changes in status determinations from 2005 to 2006 is shown in Table 1. These changes are further illustrated in Tables 11 and 12.

Table 1. Number of stocks or stock complexes that have changed status compared to their listing in 2005. To read this table, note the number of stocks with a status change from 2005 (shown in blue) and see the determination in 2006 (shown in tan). For example, 2 stocks listed in 2005 as subject to overfishing are listed in 2006 as not subject to overfishing – *Atlantic sea scallop* and *Gulf of Mexico vermilion snapper*.

	Status in *2005*		
Status in *2006*	Overfishing	Not Overfishing	Unknown/Undefined
Overfishing	-	4[a]	2[b]
Not overfishing	2[c]	-	4[d]
Unknown/Undefined	1[e]	1[f]	-
	Status in *2005*		
Status in *2006*	Overfished	Not Overfished	Unknown/Undefined
Overfished	-	4[g]	2[h]
Not overfished	1[i]	-	3[j]
Unknown/Undefined	12[k]	13[l]	-

a. *Winter skate, Gulf of Mexico gag, Eastern Pacific yellowfin tuna,* and *petrale sole.*
b. *Gulf of Mexico gray triggerfish* and *dusky shark.*
c. *Atlantic sea scallop* and *Gulf of Mexico vermilion snapper.*
d. *Southern Georges Bank/Middle Atlantic silver hake, cabezon-south, blackgill rockfish,* and *porbeagle shark.*
e. *Large coastal shark complex.*
f. *Blacktip shark–Atlantic.*
g. *Monkfish–north, monkfish–south, South Atlantic pink shrimp, sandbar shark.*
h. *Porbeagle shark* and *dusky shark.*
i. *Gulf of Mexico Vermilion Snapper.*
j. *South Atlantic gag, Pacific halibut,* and *Aleutian Islands walleye pollock.*
k. *Large coastal shark complex* and evaluation stocks: *SA red snapper, SA red grouper, SA black grouper, SA speckled hind, SA warsaw grouper, SA red drum, SA Nassau grouper, SA goliath grouper and GM goliath grouper (now listed as a single SA/GM stock), GM Nassau grouper,* and *GM red drum.*
l. *Blacktip shark–Atlantic* and evaluation stocks: *SA gag, SA scamp, SA white grunt, SA gray triggerfish, SA wreckfish, SA mutton snapper, SA gray (mangrove) snapper, SA yellowedge grouper, SA lane snapper, SA/GM little tunny, GM gag,* and *GM stone crab.*

Historical Perspectives

In 2005, NMFS completed 196 assessments. Determinations of overfishing status were made for 139 stocks or stock complexes while the status of 57 was unknown or undefined, or such determinations were not applicable. Of those that resulted in known determinations:

- 18 (13 percent) were subject to overfishing, and
- 121 (87 percent) were not subject to overfishing.

Determinations of overfished status were made for 122 stocks or stock complexes while the status of 74 was unknown or undefined, or such determinations were not applicable. Of those that resulted in known determinations:

- 28 (23 percent) were overfished, and
- 94 (77 percent) were not overfished.

[6] The 900+ fish stocks identified in management plans are now managed as 530 stocks and stock complexes, of which 230 are tracked with the Fish Stock Sustainability Index and other performance measures.

In 2006, NMFS completed 108 assessments. Determinations of overfishing status were made for 102 stocks or stock complexes while the status of 6 was unknown or undefined, or such determinations are not applicable. Of those that resulted in known determinations:

- 19 (19 percent) were subject to overfishing, and
- 83 (81 percent) were not subject to overfishing.

Determinations of overfished status were made for 86 stocks or stock complexes while the status of 22 was unknown or undefined, or such determinations are not applicable. Of those that resulted in known determinations:

- 19 (22 percent) stocks or stock complexes were overfished, and
- 67 (78 percent) were not overfished.

NMFS then combined the numbers of stocks assessed in either 2005 or 2006, counting stocks that were assessed in both years only once and using the most recent determination. In the 2 years combined, NMFS reviewed 226 discrete stocks or stock complexes. Determinations of overfished status were made for 169 stocks or stock complexes while the status of 57 was unknown or undefined, or such determinations are not applicable. Of those that resulted in known determinations:

- 33 (20 percent) stocks or stock complexes subject to overfishing, and
- 136 (80 percent) were not subject to overfishing.

Determinations of overfished status were made for 112 stocks or stock complexes while the status of 114 was unknown or undefined, or such determinations are not applicable.
Of those that resulted in known determinations:

- 24 (21 percent) stocks or stock complexes were overfished, and
- 88 (79 percent) were not overfished.

Finally, NMFS reviewed the overfishing listings in 2001 and compared the status of those stocks listed as subject to overfishing in 2006. In 2001, 62 stocks (representing 42 stocks and stock complexes) were listed as subject to overfishing.

Between 2001 and 2006..	Stocks *removed* since 2001	Stocks *added* since 2001
..Twelve (12) stocks were removed from the list and are no longer subject to overfishing in 2006.	*Gulf of Maine (GOM) haddock* *American plaice* *Atlantic sea scallop* *spiny dogfish* *black sea bass* *golden tilefish* *red porgy* *yellowtail snapper* *vermillion snapper* *red drum* *blacktip shark* *swordfish*	
..One (1) stock complex was removed as unknown based on a new assessment.	*Large coastal shark complex*	
..Twelve (12) stocks or complexes have been added to the list by 2006, after being previously listed as not subject to overfishing.		*Georges Bank (GB) cod* *Cape Cod/GOM yellowtail flounder* *SNE/MA winter flounder* *GB yellowtail flounder* *GB winter flounder* *greater amberjack* *gray triggerfish* *Grouper Unit 1* *petrale sole*

		Eastern Pacific yellowfin tuna *Central Western Pacific yellowfin tuna*[7] *finetooth shark*
..Six (6) stocks or stock complexes have been added to the list by 2006, after being previously listed as unknown or undefined.		*winter skate* *Grouper Unit 4* *Parrotfishes* *Snapper Unit 1* *Pacific bigeye tuna*[8] *dusky shark*
..One (1) stock complex was newly added to the report as subject to overfishing.		*Bottomfish multi-species complex – HI Archipelago*[9]

In summary, since 2001 -
13 stocks or complexes removed from the overfishing list.
19 stocks or complexes added to the list.

Similarly, NMFS reviewed the overfished listings in 2001 and compared the status of those stocks listed as overfished in 2006. In 2001, 80 stocks (representing 57 stocks and stock complexes) were listed as overfished.

Between 2001 and 2006..	Stocks *removed* since 2001	Stocks *added* since 2001
..Thirteen (13) stocks were removed from the list and are no longer overfished in 2006.	*redfish* *silver hake – So. Georges Bank/Mid-Atl.* *golden tilefish (MA)* *black sea bass (MAFMC)* *gag* *Red grouper (SAFMC)* *golden tilefish (SA)* *yellowtail snapper* *king mackerel – Gulf group* *lingcod* *widow rockfish* *Bering Sea Tanner crab* *swordfish*	
..Fourteen (14) stock complex was removed as unknown based on a new assessment.	*Red grouper (GMFMC)*[*] *Spiny dogfish*[**] *Red snapper (SAFMC)*[***] *Speckled hind (SAFMC)* [***] *Warsaw grouper (SAFMC)* [***] *Black grouper (SAFMC)* [***] *Goliath grouper (SAFMC/ GMFMC)* [***] *Nassau grouper (SAFMC)* [***] *Red drum (SAFMC)* [***] *Vermilion snapper (SAFMC)* [***] *Nassau grouper (GMFMC)* [***] *Red drum (GMFMC)* [***] *large coastal shark complex* *blacktip shark*	
..Fourteen (14) stocks or complexes have been added to the list by 2006, after being previously listed as not subject to overfishing.		*Gulf of ME cod* *GB cod* *Gulf of ME haddock* *GB haddock* *American plaice* *CC/GOM YTF* *GB YTF* *SNE/MA windowpane flounder* *SNE/MA winter flounder* *Monkfish – North* *Butterfish* *Pink shrimp* *Yelloweye rockfish* *Pribilof Islands blue king crab*
..Three (3) stocks or stock complexes		*Thorny skate*

[7] The two yellowfin tuna stocks were undefined in 2001 and was not overfishing in 2003, the first year a determination could be made.
[8] This stock was undefined in 2001 and was listed as subject to overfishing in 2003, the first year in which a determination was made.
[9] This complex was added as a result of a new FMP.

have been added to the list by 2006, after being previously listed as unknown or undefined.		*Grouper Unit 4 (Yellowfin grouper)* *Porbeagle shark*

* Stocks are now rebuilding.
** Removed because there is no approved rebuilding target.
*** Stocks removed as part of re-evaluation of SDC (See Appendix 1).

In summary, since 2001 -
27 stocks or complexes removed from the overfished list.
17 stocks or complexes added to the list.

Changes in Biomass Levels

The Fish Stocks Sustainability Index (FSSI) is a performance measure for the sustainability of 230 U.S. fish stocks selected for their importance to commercial and recreational fisheries. The FSSI establishes a threshold of 80 percent of the biomass that supports the maximum sustainable yield as an indicator of sustainability for non-rebuilding stocks. Stocks with biomass above that level are considered to be within the range of natural fluctuation around the B_{MSY} level, which is defined as a long-term average. The following stocks have biomass levels determined, in 2006, to have increased above the 80 percent criterion.

- In the Northeast Region –
  The biomass of:
  - *Bluefish (except Gulf of Mexico)* is at 95 percent of maximum sustainable yield.
- In the Southeast Region –
  The biomass of:
  - *Gulf of Mexico Vermilion Snapper* is at 152 percent of maximum sustainable yield.
  - *South Atlantic Tilefish* is now at 95 percent of maximum sustainable yield.
  - *South Atlantic Gag* is at 117 percent of maximum sustainable yield.
- In the Southwest Region –
  - The biomass of *Yellowfin Tuna–Eastern Pacific* is now at 99 percent of maximum sustainable yield.

There are no changes for the other regions.

Table 2. Description of FSSI and non-FSSI Stocks by Council, 2006.

Jurisdiction*	Stock Group	Number of Stocks	Overfishing					Overfished					Approaching Overfished Condition
			Yes	No	Not Known	Not Defined	N/A	Yes	No	Not Known	Not Defined	N/A	
NEFMC	FSSI	34	9	21	2	2	0	14	19	1	0	0	0
	NonFSSI	1	0	1	0	0	0	1	0	0	0	0	0
	Total	35	9	22	2	2	0	15	19	1	0	0	0
MAFMC	FSSI	11	2	9	0	0	0	2	8	1	0	0	0
	NonFSSI	0	0	0	0	0	0	0	0	0	0	0	0
	Total	11	2	9	0	0	0	2	8	1	0	0	0
NEFMC/ MAFMC	FSSI	3	2	1	0	0	0	2	0	0	1	0	0
	NonFSSI	0	0	0	0	0	0	0	0	0	0	0	0
	Total	3	2	1	0	0	0	2	0	0	1	0	0
SAFMC	FSSI	21	10	10	1	0	0	4	6	11	0	0	0
	NonFSSI	65	1	11	51	2	0	0	1	62	2	0	0
	Total	86	11	21	52	2	0	4	7	73	2	0	0
GMFMC	FSSI	17	5	8	4	0	0	2	5	0	10	0	0
	NonFSSI	37	0	5	30	2	0	0	0	1	36	0	0
	Total	54	5	13	34	2	0	2	5	1	46	0	0
SAFMC/ GMFMC	FSSI	10	0	9	1	0	0	0	7	3	0	0	0
	NonFSSI	2	0	0	1	1	0	0	0	1	1	0	0
	Total	12	0	9	2	1	0	0	7	4	1	0	0
CFMC	FSSI	8	4	1	3	0	0	4	0	3	0	0	1
	NonFSSI	14	1	0	13	0	0	0	0	13	0	0	1
	Total	22	5	1	16	0	0	4	0	16	0	0	2
PFMC	FSSI	48	2	28	17	1	0	6	26	13	3	0	0
	NonFSSI	119	0	15	51	0	53	0	13	52	0	53	1
	Total	167	2	43	68	1	53	6	39	65	3	53	1
WPFMC	FSSI	16	2	4	10	0	0	1	6	9	0	0	0
	NonFSSI	20	0	3	15	2	0	0	1	17	2	0	0
	Total	36	2	7	25	2	0	1	7	26	2	0	0
PFMC/ WPFMC	FSSI	6	1	2	3	0	0	0	3	3	0	0	0
	NonFSSI	4	0	0	4	0	0	0	0	4	0	0	0
	Total	10	1	2	7	0	0	0	3	7	0	0	0
NPFMC	FSSI	35	0	32	3	0	0	2	27	0	6	0	0
	NonFSSI	34	0	25	8	1	0	0	6	0	28	0	0
	Total	69	0	57	11	1	0	2	33	0	34	0	0
PFMC/ NPFMC	FSSI	0	0	0	0	0	0	0	0	0	0	0	0
	NonFSSI	1	0	1	0	0	0	0	1	0	0	0	0
	Total	1	0	1	0	0	0	0	1	0	0	0	0
HMS	FSSI	21	9	8	4	0	0	9	7	4	0	0	1
	NonFSSI	3	0	0	3	0	0	0	0	3	0	0	0
	Total	24	9	8	7	0	0	9	7	7	0	0	1
TOTAL	FSSI	230	46	133	48	3	0	46	114	48	20	0	2
	NonFSSI	300	2	61	176	8	53	1	22	153	69	53	2
	Total	530	48	194	224	11	53	47	136	201	89	53	4

* NEFMC = New England Fishery Management Council; MAFMC = Mid-Atlantic Fishery Management Council; SAFMC = South Atlantic Fishery Management Council; GMFMC = Gulf of Mexico Fishery Management Council; CFMC = Caribbean Fishery Management Council; PFMC = Pacific Fishery Management Council; WPFMC = Western Pacific Fishery Management Council; NPFMC = North Pacific Fishery Management Council; HMS = Atlantic Highly Migratory Species.

Management Actions to Address Overfishing and Overfished Determinations

In 2006, several stocks were added to the list of stocks subject to overfishing and stocks overfished (see Table 1). NMFS, through its regional offices, is working closely with the relevant Councils to address these determinations and reverse downward trends. Below is a summary of new management actions planned or begun to address overfishing and overfished determinations.

Northeast Region

- NMFS notified the NEFMC on October 17, 2006, that *winter skate* was subject to overfishing. No action has been taken to date.
- *Monkfish north* and *monkfish south* are both managed under plans implemented due to a 1997 overfished determination. In 2001 the rebuilding northern stock came off the overfished list, and in 2003 the southern stock followed. In 2006, however, survey indices indicate that both stocks have both fallen below their overfished thresholds. NMFS is proposing interim rebuilding measures for the 2007 monkfish fishery, pending results of a new stock assessment that will be conducted in the summer of 2007.

Southeast Region

- NMFS notified the GMFMC on October 11, 2006, that *gag* and *gray triggerfish* were subject to overfishing. Amendment 30 to the Reef Fish FMP is currently under development. This amendment examines a range of alternatives to end overfishing for these stocks. The Council expects to submit the amendment for review during the summer of 2007.
- *Pink shrimp* was listed as overfished on November 3, 2006. The SAFMC Shrimp Review Advisory Panel met in February 2007 to review the cause of the decline in status of the pink shrimp stock and recommend any appropriate Council action. Pink shrimp are an annual crop. The Panel concluded the apparent decline in pink shrimp abundance does not appear to be due to overfishing and recommended no management actions at this time. The Panel feels that the pink shrimp stocks in some areas along the Southeast coast are depleted due to factors other than fishing, such as environmental and climatic factors.

Southwest Region

- The PFMC was notified on October 25, 2006, that *yellowfin tuna–Eastern Pacific* was subject to overfishing. The U.S. harvest for yellowfin tuna in the Eastern Pacific is less than one-half percent of the stockwide catch.[10] The PFMC has proposed to work with NMFS, the Department of State, and the U.S. delegations to Pacific tuna Regional Fishery Management Organizations to develop recommendations to end overfishing. To be consistent with the Inter-American Tropical Tuna Commission (IATTC) resolution C-04-09 (June 2004), NMFS prohibited fishing for tuna with purse seine gear in the Eastern Tropical Pacific Ocean for a 6-week period

[10] Pacific Fishery Management Council. 2006. Status of the U.S. West Coast Fisheries for Highly Migratory Species through 2005: Stock Assessment and Fishery Evaluation. Portland, OR. 128 pp.

(November 20 to December 31) in 2004, 2005, and 2006. For 2007, NMFS published a proposed rule to implement Resolution C-06-02 (June 2006). The comment period for this proposed rule closed March 28, 2007. At this time, NMFS is addressing comments to this proposed rule. The final rule will include a closure of the tuna purse seine fishery for a 6-week period in 2007.

Northwest Region

- NMFS notified the PFMC on February 14, 2007 that *petrale sole* was subject to overfishing. The overfishing status determination is based on catch exceeding the 2005 acceptable biological catch level by 0.14 percent. Preliminary information suggests that overfishing did not continue in 2006. Management measures such as reduced trip limits and improved data tracking have been implemented for 2007–2008.

Highly Migratory Species

- The HMS division published a notice in the *Federal Register* on November 7, 2006 (71 FR 65086), indicating that *porbeagle shark* and *sandbar shark* are overfished, and that *dusky shark* is overfished and subject to overfishing. NMFS is examining management alternatives for an amendment to the HMFS FMP to end overfishing and rebuild these overfished stocks.

These management actions, as with all management actions, require time to implement, and still more time to show an impact in the fishery. Regardless, management actions can have a real and positive impact on a stock, even if it is not reflected in a change in its listed status. For instance, darkblotched rockfish, a slow-growing stock from the Pacific Northwest, has been under a rebuilding plan since 2002. As the catch (as proxy for fishing mortality) has decreased (see Figure 1), the biomass has increased significantly (See Figure 2). While this stock remains listed as overfished because stock size is still below the overfished threshold, important progress has been made.

Figure 1. Changes in Darkblotched Rockfish total fishing mortality (in mt) Relative to Acceptable Biological Catch (ABC), 1997–2005.

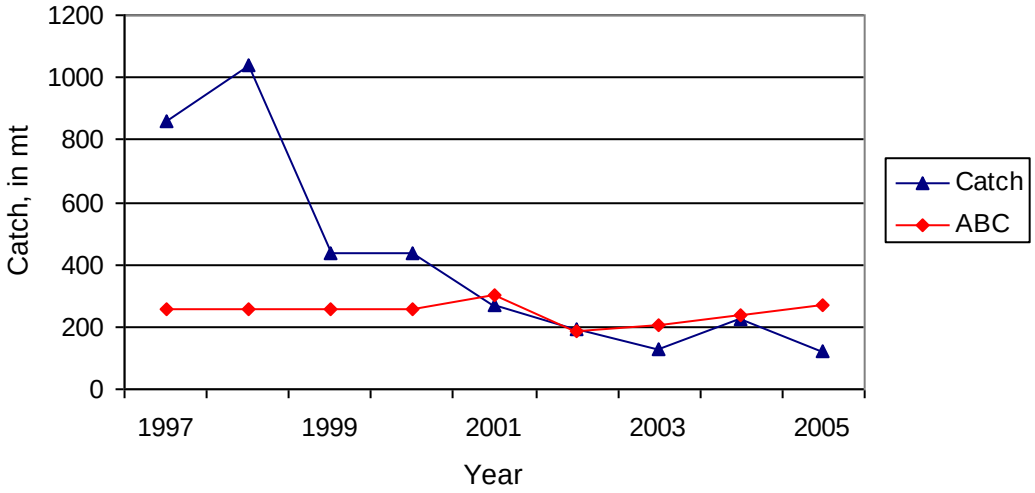
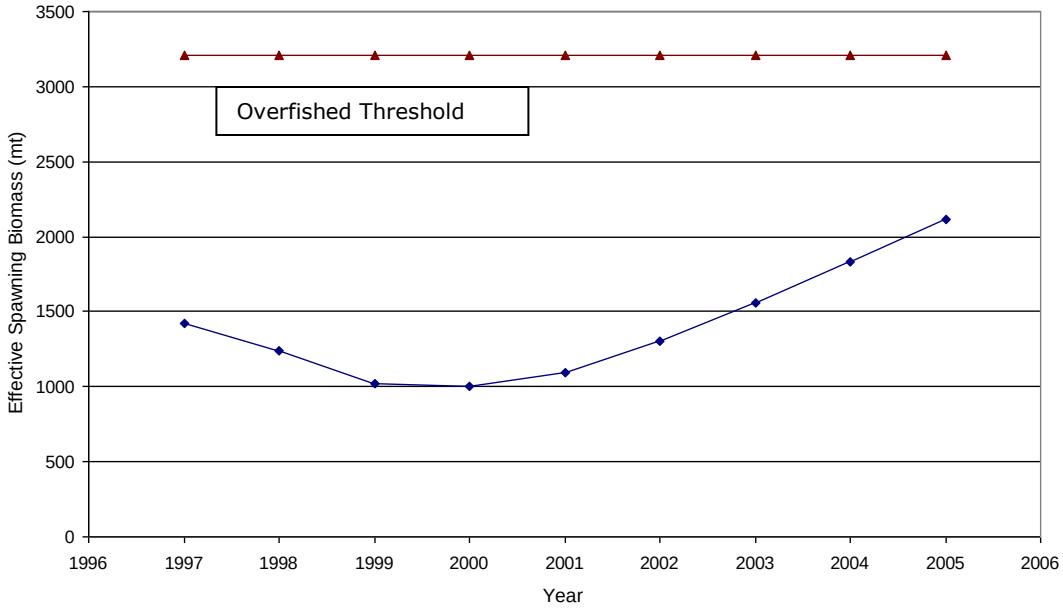


Figure 2. Changes in darkblotched rockfish stock status, 1997–2005. Stock status for darkblotched rockfish is based on spawning output in terms of eggs. From: "Status of the Darkblotched Rockfish (*Sebastes crameri*) Resource in 2005" by Dr. Jean Beyer Rogers (SAFE, 2006).



Status Determinations by Region

Northeast Region

Thirteen FMPs containing 49 stocks or complexes are managed by NMFS and the New England and Mid-Atlantic Fishery Management Councils: Atlantic Sea Scallop; Northeast Multispecies; Northeast Skate; Atlantic Herring; Red Crab; Monkfish; Spiny Dogfish; Summer Flounder, Scup and Black Sea Bass; Atlantic Bluefish; Atlantic Surfclam and Ocean Quahog; Atlantic Mackerel, Squid, and Butterfish; Tilefish; and Atlantic Salmon. Within these FMPs, 13 stocks are subject to overfishing, 19 stocks[11] are overfished, and no stocks are approaching an overfished condition. See Table 3.

Table 3. Northeast Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

Council	FMP	Overfishing	Overfished	Approaching
NEFMC	Atlantic salmon	-	*Atlantic salmon*	-
	Northeast Multispecies	*cod - Gulf of Maine* *cod - Georges Bank* - - *yellowtail flounder – Georges Bank* *yellowtail flounder - Southern New England (SNE)/Mid-Atlantic (MA)* *yellowtail flounder - Cape Cod/Gulf of Maine* *white hake* - *winter flounder – SNE/MA* *winter flounder – Georges Bank* - -	*cod - Gulf of Maine* *cod - Georges Bank* *haddock - Gulf of Maine* *haddock - Georges Bank* *American plaice* *yellowtail flounder – Georges Bank* *yellowtail flounder - Southern New England SNE/MA* *yellowtail flounder - Cape Cod/Gulf of Maine* *white hake* *windowpane flounder – SNE/MA* *winter flounder – SNE/MA* - - *ocean pout* *Atlantic halibut*	-
	Northeast Skate	- *winter skate*	*thorny skate* -	-
NEFMC/ MAFMC	Monkfish	*monkfish - North* *monkfish – South*	*monkfish - North* *monkfish – South*	-
MAFMC	Summer Flounder, Scup and Black Sea Bass	*summer flounder* *scup*	- *scup*	-
	Atlantic Mackerel, Squid, and Butterfish		*butterfish*	-

[11] There is currently no definition in the Spiny Dogfish FMP to make a determination of biomass target. Based on the current NMFS-recommended biomass threshold, however, the biomass estimates indicate this stock is overfished.

Southeast Region

Eighteen FMPs[12] containing 175 stocks or complexes are managed by NMFS and the South Atlantic, Caribbean, and Gulf of Mexico Fishery Management Councils: South Atlantic Golden Crab; South Atlantic Shrimp; South Atlantic Snapper Grouper; Atlantic Coast Red Drum; Coral, Coral Reefs, and Live/Hard Bottom Habitats of the South Atlantic Region; Pelagic Sargassum Habitat of the South Atlantic Region; Dolphin Wahoo; Coastal Migratory Pelagics of the Gulf of Mexico and South Atlantic; Gulf of Mexico/South Atlantic Spiny Lobster; Gulf of Mexico Stone Crab; Gulf of Mexico Shrimp; Reef Fish Resources of the Gulf of Mexico; Gulf of Mexico Red Drum; Coral and Coral Reefs of the Gulf of Mexico; Reef Fish Fishery of Puerto Rico and the U.S. Virgin Islands; Spiny Lobster Fishery of Puerto Rico and the U.S. Virgin Islands; Queen Conch Resources of Puerto Rico and the U.S. Virgin Islands; and Corals and Reef Associated Invertebrates of Puerto Rico and the U.S. Virgin Islands. Within these FMPs, 21 stocks are subject to overfishing, 10 stocks are overfished, and 2 stocks are approaching an overfished condition. See Table 4.

Table 4. Southeast Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition

Council	FMP	Overfishing	Overfished	Approaching
SAFMC	South Atlantic Snapper Grouper	*vermilion snapper* *red snapper* *snowy grouper* *red grouper* *black sea bass* *gag* *speckled hind* *warsaw grouper* *tilefish* *black grouper* - - -	- - *snowy grouper* - *black sea bass* - - - - - - - *red porgy*	None
	South Atlantic Shrimp	-	*pink shrimp*	None
	Atlantic Coast Red Drum	*red drum*	-	None
GMFMC	Reef Fish Resources of the Gulf of Mexico	*red snapper* *red grouper* *greater amberjack* - - *gag* *gray triggerfish*	*red snapper* - *greater amberjack* - - - -	None
	Gulf of Mexico Red Drum	-	-	None
CFMC	Reef Fish Fishery of Puerto Rico and the USVI	*Grouper Unit 1* - *Grouper Unit 4* *Snapper Unit 1* *Parrotfishes*	*Grouper Unit 1* *Grouper Unit 2* *Grouper Unit 4* - -	- - - *Snapper Unit 1* *Parrotfishes*
	Queen Conch Resources of Puerto Rico and the USVI	*queen conch*	*queen conch*	-

[12] Last year's report listed a Calico Scallop FMP as under development; however, no plans exist to implement an FMP in the EEZ for this species.

Southwest Region

Two FMPs containing 19 stocks or complexes[13] are managed by NMFS and the Pacific Fishery Management Council: Coastal Pelagic Species and the new West Coast Highly Migratory Species. Within these FMPs, 2 stocks are subject to overfishing, no stocks are overfished, and no stocks are approaching an overfished condition. See Table 5.

Table 5. Southwest Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

FMP	Overfishing	Overfished	Approaching
West Coast Highly Migratory Species	*yellowfin tuna - Eastern Pacific* *bigeye tuna - Pacific*[*]	- -	None

[*] This stock also appears in Table 7 as a stock subject to overfishing in the Pacific Islands Region' s *Pelagic Fisheries of the Western Pacific Region FMP*. Each of the 10 stocks shared between these two FMPs is listed only once in the support tables as a single stock managed under both FMPs. The Southwest and the Pacific Islands Regions, along with the Pacific and Western Pacific Fishery Management Councils, are working together to end overfishing in this stock.

[13] Total includes 10 pelagic species shared with the Pacific Islands Region.

Northwest Region

Two FMPs containing 158 stocks or complexes are managed by NMFS and the Pacific Fishery Management Council: West Coast Salmon and Pacific Coast Groundfish. In addition, Pacific halibut is managed jointly with the Alaska Region and the International Pacific Halibut Commission. Within these FMPs, 1 stock is subject to overfishing, 6 stocks are overfished, and 1 stock is approaching an overfished condition. See Table 6.

Table 6. Northwest Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

FMP	Overfishing	Overfished	Approaching
Pacific Coast Groundfish	- - - - - - *Petrale sole*	*bocaccio* *canary rockfish* *darkblotched rockfish* *cowcod* *yelloweye rockfish* *Pacific ocean perch* -	None
West Coast Salmon	-	-	*Klamath River fall (Klamath and Trinity Rivers) Chinook salmon*

Pacific Islands Region

Five FMPs containing 45 stocks or complexes[14] are managed by NMFS and the Western Pacific Fishery Management Council: Pelagic Fisheries of the Western Pacific Region; Crustaceans Fisheries of the Western Pacific Region; Precious Coral Fisheries of the Western Pacific Region; Bottomfish and Seamount Groundfish Fisheries of the Western Pacific Region; and Coral Reef Ecosystems of the Western Pacific Region. Within these FMPs, 3 stock or stock complexes are subject to overfishing, 1 stock or stock complex is overfished, and no stock or stock complexes are approaching an overfished condition. See Table 7.

Table 7. Pacific Islands Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

FMP	Overfishing	Overfished	Approaching
Pelagic Fisheries of the Western Pacific Region	*bigeye tuna - Pacific* * *yellowfin tuna – central Western Pacific*	- -	None
Bottomfish and Seamount Groundfish Fisheries of the Western Pacific Region	- *Bottom Multispecies complex – Hawaiian archipelago*	*Seamount Groundfish complex – Hancock Seamount*** -	None

* This stock also appears in Table 5 as a stock subject to overfishing in the Southwest Region's *West Coast Highly Migratory Species FM*P. Each of the 10 stocks shared between these two FMPs is listed only once in the support tables as a single stock managed under both FMPs. The Southwest and the Pacific Islands Regions, along with the Pacific and Western Pacific Fishery Management Councils, are working together to end overfishing in this stock.

** *Pelagic armorhead* is assessed as the indicator species of a 3-species groundfish complex that includes *raftfish* and *alfonsin*.

[14] Total includes 10 pelagic species shared with the Southwest region.

Alaska Region

Five FMPs containing 69 stocks or complexes are managed by NMFS and the North Pacific Fishery Management Council: GOA Groundfish; BSAI Groundfish; Bering Sea and Aleutian Islands King and Tanner Crab; Alaska Weathervane Scallops; and Alaska High Seas Salmon. In addition, Pacific halibut is managed jointly with the Northwest Region and the International Pacific Halibut Commission. Within these FMPs, no stocks or stock complexes are subject to overfishing, 2 stocks or stock complexes are overfished, and no stocks or stock complexes are approaching an overfished condition. See Table 8.

Table 8. Alaska Region stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

FMP	Overfishing	Overfished	Approaching
BSAI King and Tanner Crab	- -	*blue king crab - Pribilof Islands* *blue king crab – Saint Matthew Island*	None

Atlantic Highly Migratory Species

One FMP[15] containing 23 stocks or complexes are managed by NMFS. Within this FMP, 9 stocks or stock complexes are subject to overfishing, 9 stocks or stock complexes are overfished, and one stock is approaching an overfished condition. See Table 9.

Table 9. Atlantic Highly Migratory stocks that are subject to overfishing, are overfished, or are approaching an overfished condition.

FMP	Overfishing	Overfished	Approaching
Atlantic Highly Migratory Species	*blue marlin - Atlantic* *white marlin - Atlantic* *sailfish - West Atlantic* *bigeye tuna - Atlantic* *albacore - North Atlantic* *bluefin tuna - West Atlantic* - *finetooth shark* *dusky shark* *sandbar shark**	*blue marlin - Atlantic* *white marlin - Atlantic* *sailfish - West Atlantic* *bigeye tuna - Atlantic* *albacore - North Atlantic* *bluefin tuna - West Atlantic* porbeagle shark - *dusky shark* *sandbar shark**	*yellowfin tuna - Atlantic*

* This stock is part of the Large Coastal Shark complex, but is assessed separately.

[15] A final rule, implemented on October 2, 2006 (67 FR 58057), amended the Atlantic Billfish FMP and the Atlantic Tunas, Swordfish, and Sharks FMP by consolidating them into a single Highly Migratory Species FMP.

Table 11. Comparing stocks or stock complexes with "subject to overfishing" determinations in 2005 and 2006. Stocks in **BOLD** were added to the list in 2006. Stocks in *ITALICS* under "2005" were removed from the list in 2006.

COUNCIL	2005	2006	COUNCIL	2005	2006
NEFMC	cod - Gulf of Maine cod - Georges Bank yellowtail flounder - SNE/ Mid-Atlantic yellowtail flounder - Cape Cod/Gulf of Maine white hake winter flounder - SNE/ Mid-Atlantic *ATLANTIC SEA SCALLOP* yellowtail flounder – Georges Bank winter flounder – Georges Bank	cod - Gulf of Maine cod - Georges Bank yellowtail flounder - SNE/ Mid-Atlantic yellowtail flounder - Cape Cod/Gulf of Maine white hake winter flounder - SNE/ Mid-Atlantic yellowtail flounder – Georges Bank winter flounder – Georges Bank **WINTER SKATE**	CFMC	Queen conch Grouper Unit 1 Grouper Unit 4 parrotfishes Snapper Unit 1	Queen conch Grouper Unit 1 Grouper Unit 4 parrotfishes Snapper Unit 1
NEFMC/MAFMC	monkfish - North monkfish – South	monkfish - North monkfish – South	PFMC	None	**YELLOWFIN TUNA – EASTERN PACIFIC** **PETRALE SOLE**
MAFMC	scup summer flounder	scup summer flounder	WPFMC	bottomfish multi-species complex – Hawaiian archipelago yellowfin tuna – Central Western Pacific	bottomfish multi-species complex – Hawaiian archipelago yellowfin tuna – Central Western Pacific
SAFMC	vermilion snapper red snapper snowy grouper tilefish red grouper black sea bass gag speckled hind warsaw grouper black grouper red drum	vermilion snapper red snapper snowy grouper tilefish red grouper black sea bass gag speckled hind warsaw grouper black grouper red drum	PFMC/ WPFMC	bigeye tuna – Pacific	bigeye tuna – Pacific
SAFMC/GMFMC	None	None	NPFMC	None	None
GMFMC	red snapper red grouper *VERMILION SNAPPER* greater amberjack	red snapper red grouper greater amberjack **GRAY TRIGGERFISH** **GAG**	HMS	blue marlin - Atlantic white marlin - Atlantic sailfish - West Atlantic bigeye tuna - Atlantic albacore - North Atlantic bluefin tuna - West Atlantic sandbar shark finetooth shark *LARGE COASTAL SHARK COMPLEX**	blue marlin - Atlantic white marlin - Atlantic sailfish - West Atlantic bigeye tuna - Atlantic albacore - North Atlantic bluefin tuna - West Atlantic sandbar shark finetooth shark **DUSKY SHARK**

NEFMC = New England Fishery Management Council; MAFMC = Mid-Atlantic Fishery Management Council; SAFMC = South Atlantic Fishery Management Council; GMFMC = Gulf of Mexico Fishery Management Council; CFMC = Caribbean Fishery Management Council; PFMC = Pacific Fishery Management Council; WPFMC = Western Pacific Fishery Management Council; NPFMC = North Pacific Fishery Management Council; HMS = Atlantic Highly Migratory Species.
* Based on the results of the 2006 stock assessment, this stock complex status is unknown.

Table 12. Comparing stocks or stock complexes with "overfished" determinations in 2005 and 2006. Stocks in **BOLD** were added to the list in 2005. Stocks in *ITALICS* under "2005" were removed from the list in 2006.

Council	2005	2006	Council	2005	2006
NEFMC	cod - Gulf of Maine cod - Georges Bank haddock - Gulf of Maine haddock - Georges Bank American plaice yellowtail flounder – SNE/ Mid-Atlantic yellowtail flounder - Cape Cod/Gulf of Maine yellowtail flounder – Georges Bank white hake windowpane Flounder – SNE/ Mid-Atlantic winter Flounder – SNE/ Mid-Atlantic ocean pout Atlantic halibut thorny skate Atlantic salmon	cod - Gulf of Maine cod - Georges Bank haddock - Gulf of Maine haddock - Georges Bank American plaice yellowtail flounder – SNE/ Mid-Atlantic yellowtail flounder - Cape Cod/Gulf of Maine yellowtail flounder – Georges Bank white hake windowpane Flounder – SNE/ Mid-Atlantic winter Flounder – SNE/ Mid-Atlantic ocean pout Atlantic halibut thorny skate Atlantic salmon	CFMC	queen conch Grouper Unit 1 Grouper Unit 2 Grouper Unit 4	queen conch Grouper Unit 1 Grouper Unit 2 Grouper Unit 4
NEFMC/ MAFMC	None	**MONKFISH – NORTH** **MONKFISH – SOUTH**	PFMC	bocaccio canary rockfish darkblotched rockfish cowcod yelloweye rockfish Pacific ocean perch	bocaccio canary rockfish darkblotched rockfish cowcod yelloweye rockfish Pacific ocean perch
MAFMC	butterfish scup	butterfish scup	WPFMC	Seamount Groundfish complex - Hancock Seamounts	Seamount Groundfish complex - Hancock Seamounts
SAFMC	*RED SNAPPER** snowy grouper *RED GROUPER** black sea bass *SPECKLED HIND** WARSAW GROUPER* *BLACK GROUPER** red porgy *GOLIATH GROUPER** *NASSAU GROUPER** *RED DRUM**	snowy grouper black sea bass red porgy **PINK SHRIMP****	PFMC/ WPFMC	None	None
SAFMC/ GMFMC	None	None	NPFMC	blue king crab - Pribilof Islands blue king crab - Saint Matthew Island	blue king crab - Pribilof Islands blue king crab - Saint Matthew Island
GMFMC	red snapper greater amberjack *VERMILION SNAPPER* *NASSAU GROUPER** *GOLIATH GROUPER** *RED DRUM**	red snapper greater amberjack	HMS	blue marlin (Atlantic) white marlin (Atlantic) sailfish (West Atlantic) bigeye tuna (Atlantic) albacore (North Atlantic) bluefin tuna (West Atlantic) *LARGE COASTAL SHARK COMPLEX****	blue marlin (Atlantic) white marlin (Atlantic) sailfish (West Atlantic) bigeye tuna (Atlantic) albacore (North Atlantic) bluefin tuna (West Atlantic) **SANDBAR SHARK** **PORBEAGLE SHARK** **DUSKY SHARK**

NEFMC = New England Fishery Management Council; MAFMC = Mid-Atlantic Fishery Management Council; SAFMC = South Atlantic Fishery Management Council; GMFMC = Gulf of Mexico Fishery Management Council; CFMC = Caribbean Fishery Management Council; PFMC = Pacific Fishery Management Council; WPFMC = Western Pacific Fishery Management Council; NPFMC = North Pacific Fishery Management Council; HMS = Atlantic Highly Migratory Species

* The SDC used to determine overfished status is not appropriate. Consequently, this stock status is unknown.

** Pink shrimp are an annual crop. A panel concluded the apparent decline in pink shrimp abundance appears to be due to environmental factors, rather than overfishing.

*** Based on the results of the 2006 stock assessment, this stock complex status is unknown.