Fish Assessment Report

FY 2019 Report



Overview

NOAA Fisheries uses <u>stock assessments</u> to monitor the condition of nearly 500 fish stocks and stock complexes (groups of similar stocks managed together). Stock assessments are scientific efforts that involve data collection, data processing, and mathematical modeling that estimate the health and size of a fish stock, measure how fishing affects the stock, and project harvest levels that achieve the largest sustainable long-term yield (Figure 1). This page provides an annual report, broken out by fiscal year (October 1 – September 30) and quarter, detailing NOAA Fisheries' planned and completed stock assessments.

Stock assessments are the backbone of sustainable fisheries management. Fishery managers use the results of assessments to evaluate the status of fish stocks and set <u>annual catch limits (ACLs)</u>. An ACL is the largest amount of fish that commercial and recreational fisheries can sustainably harvest from a stock in one year. They help prevent overfishing (catching too many fish) from occurring and help fishers to catch the maximum number of fish over the long-term. NOAA Fisheries works with its partners in each <u>management area</u> to conduct stock assessments, but does not assess all managed stocks each year. Each region rotates the stocks it assesses based upon the availability of data, the complexity of available data, the structure and diversity of local fisheries, its available resources, and the regional processes for scheduling, reviewing, and using stock assessment results in management.

NOAA Fisheries sorts stocks into two general categories for tracking and reporting purposes. It tracks the stocks with higher levels of commercial, recreational, or ecological value as components of the <u>Fish Stock Sustainability Index (FSSI)</u>. NOAA Fisheries prioritizes FSSI stocks for assessments that make use of its most advanced techniques and tools. NOAA Fisheries also conducts stock assessments of many stocks not on the FSSI list (non-FSSI stocks) in order to provide the necessary management advice for them.

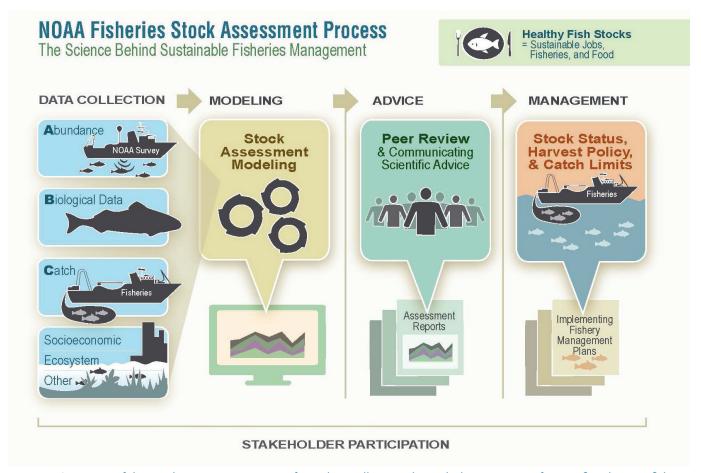


Figure 1: Overview of the stock assessment process from data collection through the provision of scientific advice to fishery managers. Stakeholders and other partners participate in each step of the assessment process. This report captures NOAA Fisheries products associated with the 'Advice' phase of the process.

Planned and Completed Assessments

NOAA Fisheries planned 171 stock assessments for the 2019 fiscal year (October 1 - September 30). Due to schedule changes highlighted in Appendices A and B, the actual count of completed stock assessments for 2019 was 187. That included 83 assessments of FSSI stocks and 104 assessments of non-FSSI stocks. The tables below show the regional breakdown of this year's planned and completed FSSI and non-FSSI stock assessments. Complete lists are available in Appendix A for assessed FSSI stocks, Appendix B for assessed non-FSSI stocks, and Appendix C for planned assessments in 2019.

Planned Assessments

	Quar	ter 1	Quarter 2		Quarter 3		Quai	ter 4	То	tal
Region	FSSI	Non- FSSI	FSSI	Non- FSSI	FSSI	Non- FSSI	FSSI	Non- FSSI	FSSI	Non- FSSI
Alaska	31	13	0	0	1	1	0	4	32	18
West Coast*	0	0	2	64	5	0	4	1	11	65
Pacific Islands	0	0	0	1	3	12	0	3	3	16
Greater Atlantic	0	0	1	0	0	0	6	1	7	1
Southeast	2	0	14	0	0	0	0	2	16	2
Subtotal	33	13	17	65	9	13	10	11	69	102
Total	4	6	8	2	2	2	2	1	17	71

Completed Assessments

	Quar	ter 1	Quar	ter 2	Quar	ter 3	Quar	ter 4	То	tal
Region	FSSI	Non- FSSI	FSSI	Non- FSSI	FSSI	Non- FSSI	FSSI	Non- FSSI	FSSI	Non- FSSI
Alaska	33 ⁺	11 ⁻	1+	0	3 ⁺	1	0	3⁻	37 ⁺	15 ⁻
West Coast*	0	0	2	64	2-	0	19 ⁺	6+	23+	70⁺
Pacific Islands	0	0	0	1	0-	12	3 ⁺	3	3	16
Greater Atlantic	0	0	1	0	0	0	15 ⁺	1	16 ⁺	1
Southeast	1-	2+	3-	0	0	0	0	0	4-	2
Subtotal	34 ⁺	13	7-	65	5-	13	37 ⁺	13 ⁺	83 ⁺	104 ⁺
Total	47	7 +	7	2 -	1	8 -	50	0 +	18	3 7 +

Footnotes:

The West Coast region includes the Northwest and Southwest Fisheries Science Centers.

^{**} Superscript symbols indicate increases "+" and decreases "-" in the number of completed assessments relative to the number of planned assessments.

Stock Assessment Model

Stock assessment models evaluate important aspects of fish biology that shape a stock's current and future condition. NOAA Fisheries uses a variety of models to conduct stock assessments (Figure 2). When stock assessment scientists conduct an assessment they identify and develop appropriate models based upon the available data. Those models fit into one of six general categories based upon their data requirements and products:

- 1. Data-limited
- 2. Index-based
- 3. Aggregate biomass dynamics

- 4. Virtual population analysis
- 5. Statistical catch-at-length
- 6. Statistical catch-at-age

Data-limited and index-based methods are the most basic model types used by NOAA Fisheries. They provide simplified catch advice when there are limited stock-level data. Data requirements for these methods include the total catch of a stock over time or a survey-based index of total stock abundance. NOAA Fisheries has catch data available for the majority of the stocks it assesses.

The remaining modeling methods are more complex and require additional data such as the length composition (number of fish at each length category) or age composition (number of fish at each age) of a stock. These models utilize these data and advanced statistical techniques to provide comprehensive advice to fishery managers. That advice allows managers to set harvest targets, select appropriate control rules, and determine stock status.

A stock status determination includes evaluations of whether or not a stock is undergoing overfishing (being harvested above sustainable levels), overfished (has a population below a healthy level), or approaching an overfished state (is likely to become overfished in the next two years).

Stock assessment results can only be used in management after reviewers evaluate them for accuracy. When a stock assessment successfully completes its review, it is certified as the "best scientific information available". Occasionally, a stock assessment will fail its review and have its results rejected. The results of rejected assessments are not suitable for use in fisheries management. No stock assessments were rejected during the 2019 fiscal year.

Assessment models used in 2019 fiscal year stock assessments

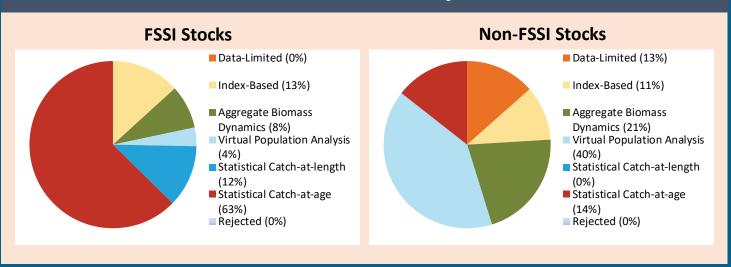


Figure 2: Proportion of each mode type used in stock assessments of FSSI and non-FSSI stocks in Fiscal Year 2019.

Stock Assessment Type

Stock assessments are a process intended to produce a product (management advice). The amount of effort involved in the stock assessment process and the product created by it varies around the United States. Because stock assessments are major scientific efforts, some regions conduct intermediate analyses that update ACLs in between assessments. As a result, stock assessment activities can be subdivided into two general categories (Figure 3).

- **Operational Stock Assessments** Analyses conducted to provide scientific advice to fishery managers. These are NOAA Fisheries' principal assessment-related activities and include efforts to create new assessment models and efforts that update existing models with the most recent data. At minimum, operational stock assessments make ACL recommendations. Those with more complex models also inform decisions related to stock status.
- **Stock Monitoring Updates** Activities that provide stock management advice to fishery managers between operational stock assessments. These analyses involve re-running the latest model (completed during an operational stock assessment) and/or forecast with updated catch information to develop new catch advice.

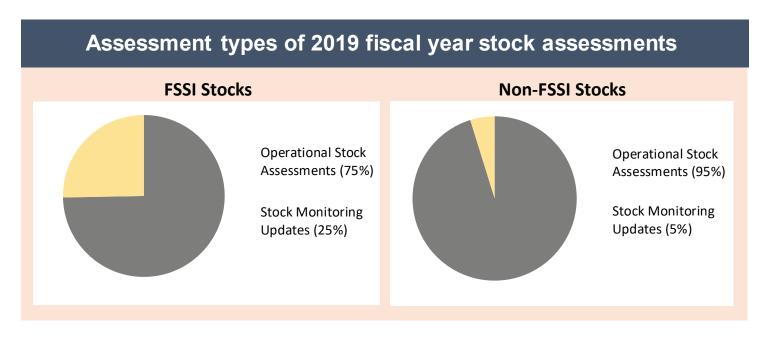


Figure 3: Breakdown of effort levels put forward in stock assessments for FSSI and non-FSSI stocks assessed in 2019.

Stock Assessment Program Performance

NOAA Fisheries monitors the performance of its stock assessment enterprise over time (Figure 4). One major measure of the enterprise's performance is the percentage of FSSI stocks with "adequate" stock assessments. Adequate stock assessments are defined as stock assessments that:

- Provide a model-derived estimate of total stock abundance, and
- Were completed within the last five years

Assessment model types that estimate total stock abundance include aggregate biomass dynamics, virtual population analysis, statistical catch-at-length, and statistical catch-at-age.

NOAA fisheries assessment trends for FSSI stocks Completed FSSI Asmts Stocks w/ Adequate Assessments 120 145 110 140 100 **Number of Stocks with Adequate Asmts** 135 90 130 Number of Completed Asmts 70 125 60 120 115 30 110 20 105 10 100 FY2010 FY2011 FY2012 FY2016 FY2017 FY2018 FY2019 FY2013 FY201A FY2015

Figure 4: The number of FSSI stock assessments completed by NOAA Fisheries annually (blue bars) and the number of FSSI stocks with adequate stock assessments (red solid line). Please see Appendix D for a table listing the most recent assessment and adequacy status of all FSSI stocks.

A downward trend in the number of stocks with adequate assessments is apparent beginning in fiscal year 2016. This is primarily due to a shift in NOAA Fisheries' priorities as it works to fulfill its statutory requirement of developing science-based ACLs for all federally managed stocks. NOAA Fisheries has extended the time between stock assessments of FSSI stocks in order to facilitate more first-time stock assessments of non-FSSI stocks. This in-turn resulted in some FSSI stocks' assessments becoming inadequate. This trend is expected to reverse over the next several years as NOAA Fisheries implements the recommendations put forward in the 2018 Next Generation Stock Assessment Improvement Plan and completes its planned first-time stock assessments of numerous non-FSSI stocks. It is important to note that many stock assessments deemed inadequate still provide useful harvest recommendations that inform fisheries management decisions.

Scientific Surveys

NOAA Fisheries scientific surveys are the primary method used to collect data on the number of fish in a given stock. These fishery-independent surveys, conducted aboard NOAA ships, chartered commercial fishing vessels, or by collaborative partners (e.g. research universities or state governments), follow a statistical sampling design that measures abundance throughout a stock's range. During them, scientists measure the numbers of each stock of fish in a given area. Many stock assessments rely on the data collected by scientific surveys.

NOAA Fisheries completed 48 scientific surveys during the 2019 fiscal year. Of those, 28 were conducted aboard NOAA ships, and 20 were conducted aboard chartered commercial vessels or partner vessels. The appendices provide lists of completed surveys (Appendix E) and planned surveys (Appendix F).

Planned Surveys

Region	Qua	rter 1	Quarter 2		Quarter 3		Qua	rter 4	То	tal
Region	NOAA	Charter	NOAA	Charter	NOAA	Charter	NOAA	Charter	NOAA	Charter
Alaska	0	0	2	0	2	1	2	8	6	9
West Coast*	0	2	1	0	2	1	5	5	8	9
Pacific Islands	1	0	0	0	1	0	1	0	3	0
Greater Atlantic	1	1	0	0	2	0	3	2	6	3
Southeast	1	0	0	0	2	0	4	1	7	1
Subtotal	3	3	3	0	9	2	15	16	30	22
Total		6		3		11	3	31	5	2

Completed Surveys

Region	Qua	rter 1	Quarter 2		Quarter 3		Qua	rter 4	To	otal
Negion	NOAA	Charter	NOAA	Charter	NOAA	Charter	NOAA	Charter	NOAA	Charter
Alaska	0	0	1-	1+	1-	0-	2	7-	4	8-
West Coast*	0	2	1	1+	4+	2+	3-	1-	8	6 ⁻
Pacific Islands	1	0	0	0	1	0	1	0	3	0
Greater Atlantic	1	1	0	0	2	2+	3	1-	6	4 ⁺
Southeast	1	0	0	0	1-	0	5 ⁺	2+	7	2 ⁺
Subtotal	3	3	2-	2+	9	4+	14 ⁻	11 ⁻	28 ⁻	20 ⁻
Total		6		4 ⁺	1	.3+	2	.5 ⁻	4	l8⁻

Footnotes:

^{*} The West Coast region includes the Northwest and Southwest Fisheries Science Centers.

^{**} Superscript symbols indicate increases "+" and decreases "-" in the number of completed assessments relative to the number of planned assessments. Changes are the result of factors such as ship and funding availability.

Frequently Asked Questions

What is a stock assessment?

A stock assessment is the process of collecting, analyzing, and reporting demographic information to determine the effects of fishing (and other drivers) on fish populations and, to the extent possible, predict future catch and stock status.

What data are used in stock assessments?

Stock assessments are typically based on models of fish populations and fisheries that require three primary categories of data inputs: catch, abundance, and biology, although data-limited assessments can be conducted when one or more of these data types are missing. Data inputs must be accurate and timely to ensure the highest quality stock assessments. To the extent feasible, ecosystem and environmental factors that affect fish stocks are included.

Why do we assess stocks?

NOAA Fisheries' stock assessments provide high-quality science information needed by managers to support sustainable fisheries as components of resilient ecosystems, communities, and economies. Assessments provide the scientific basis for determining if a stock is overfished or experiencing overfishing, calculating sustainable harvest rates, and forecasting catch levels that would implement that rate.

What is an adequate assessment?

Assessments are considered adequate when they use modeling approaches that are able to address long-term population dynamics of the stock (i.e. assessment level of 3 or above according to the 2001 Marine Fisheries Stock Assessment Improvement Plan), have been updated within five years, and are recommended as best scientific information available after being subjected to regional peer review processes. The definition of an adequate assessment will change as NOAA Fisheries finalizes and implements the Next Generation Stock Assessment Improvement Plan.

Why does the schedule of planned assessments change?

The schedule of planned assessments is provided by each region at the beginning of the fiscal year and updated in this report as new information becomes available. Changes to the schedule may occur as the feasibility and time needed to conduct assessments are refined, particularly for stocks previously unassessed or assessments using innovative methods, and as assessment needs are updated in coordination with our regional and international partners.

Where can I find more information?

https://www.fisheries.noaa.gov/topic/population-assessments/fish-stocks

https://www.st.nmfs.noaa.gov/stocksmart

https://www.fisheries.noaa.gov/national/population-assessments/fish-stock-assessment-report

Alaska Fisheries Science Center -- https:/
Northwest Fisheries Science Center -- https:/
Southwest Fisheries Science Center -- https:/
Pacific Island Fisheries Science Center -- https:/
Northeast Fisheries Science Center -- https:/
Northeast Fisheries Science Center -- https:/

https://www.fisheries.noaa.gov/region/alaska https://www.fisheries.noaa.gov/region/west-coast https://www.fisheries.noaa.gov/region/west-coast https://www.fisheries.noaa.gov/region/pacific-islands https://www.fisheries.noaa.gov/region/southeast

https://www.fisheries.noaa.gov/region/new-england-mid-atlantic

Appendix A. Assessment activity for stocks and stock complexes included on the FSSI by quarter for FY2019.

	Assessments	for FSSI Stocks - FY2019 Quarte	-	ober - December,	2018)	
Science	2		Model	4		
Center(s) ¹	Jurisdiction ²	Stock	Class ³	Asmt Type⁴	Adequate	Notes
AFSC	NPFMC	Alaska plaice - Bering Sea /	6	Stock Monitoring	Υ	
		Aleutian Islands		Analysis		
AFSC	NPFMC	Alaska skate - Bering Sea / Aleutian	6	Operational Stock	Υ	
		Islands Arrowtooth flounder - Bering Sea /		Assessment		
AFSC	NPFMC	Aleutian Islands	6	Operational Stock Assessment	Υ	
		Arrowtooth flounder - Gulf of		Stock Monitoring		
AFSC	NPFMC	Alaska	6	Analysis	Υ	
		Atka mackerel - Bering Sea /		Operational Stock		
AFSC	NPFMC	Aleutian Islands	6	Assessment	Υ	
		Bering Sea / Aleutian Islands				
AFSC	NPFMC	Blackspotted and Rougheye	6	Operational Stock	Υ	
7 3 3		Rockfish Complex		Assessment	·	
		Blue king crab - Saint Matthew		Operational Stock		
AFSC	NPFMC	Island	5	Assessment	Υ	
1500		0 15 5 11 1		Stock Monitoring	.,	
AFSC	NPFMC	Dover sole - Gulf of Alaska	6	Analysis	Y	
A.E.C.C	NIDENAG	Declarate Cult of Alcoho		Operational Stock	v	
AFSC	NPFMC	Dusky rockfish - Gulf of Alaska	6	Assessment	Υ	
۸۲۵۵	NIDENAC	Flathead sole - Bering Sea /	6	Operational Stock	Υ	
AFSC	NPFMC	Aleutian Islands	O	Assessment	Ť	
AFSC	NPFMC	Flathead sole - Gulf of Alaska	6	Stock Monitoring	Υ	
AF3C	NPFIVIC	Flatilead sole - Gull of Alaska	b	Analysis	Ţ	
AFSC	NPFMC	Greenland halibut - Bering Sea /	6	Operational Stock	Υ	
Arsc	INTTIVIC	Aleutian Islands		Assessment	'	
AFSC	NPFMC	Gulf of Alaska Blackspotted and	6	Stock Monitoring	Υ	
71136	Millivie	Rougheye Rockfish Complex	Ů	Analysis	'	
AFSC	NPFMC	Northern rock sole - Bering Sea /	6	Operational Stock	Υ	Not on initial schedule
750		Aleutian Islands		Assessment	·	
AFSC	NPFMC	Northern rock sole - Gulf of	6	Stock Monitoring	Υ	Not on initial schedule
		Alaska		Analysis		
AFSC	NPFMC	Northern rockfish - Bering Sea /	6	Stock Monitoring	Υ	
		Aleutian Islands		Analysis		
AFSC	NPFMC	Northern rockfish - Western /	6	Operational Stock	Υ	
		Central Gulf of Alaska		Assessment		
AFSC	NPFMC	Pacific cod - Bering Sea	6	Operational Stock	Υ	
				Assessment Operational Stock		
AFSC	NPFMC	Pacific cod - Gulf of Alaska	6	·	Υ	
		Pacific ocean perch - Bering Sea /		Assessment Operational Stock		
AFSC	NPFMC	Aleutian Islands	6	Assessment	Υ	
		Alculian Islanus		Stock Monitoring		
AFSC	NPFMC	Pacific ocean perch - Gulf of Alaska	6	Analysis	Υ	
				Operational Stock		
AFSC	NPFMC	Red king crab - Bristol Bay	5	Assessment	Υ	
				Assessinent		

•	ssessments	for FSSI Stocks - FY2019 Quarte		ober - December, 2	2018)	
Science			Asmt	4		
Center(s) ¹	Jurisdiction ²	Stock	Level ³	Asmt Type ⁴	Adequate	Notes
AFSC	NPFMC	Rex sole - Gulf of Alaska	6	Stock Monitoring	Υ	
				Analysis		
AFSC	NPFMC	Rock sole - Gulf of Alaska	6	Stock Monitoring	Υ	
		Sablefish - Eastern Bering Sea /		Analysis Operational Stock		
AFSC	NPFMC	Aleutian Islands / Gulf of Alaska	6	Assessment	Υ	
		Shortspine thornyhead - Gulf of		Operational Stock		
AFSC	NPFMC	Alaska	3	Assessment	Υ	
				Operational Stock		
AFSC	NPFMC	Snow crab - Bering Sea	5	Assessment	Υ	
1500	1105146		_	Operational Stock	.,	
AFSC	NPFMC	Southern Tanner crab - Bering Sea	5	Assessment	Y	
۸۲۵۵	NPFMC	Mallova pollogic Aloution Islands	6	Operational Stock	Y	
AFSC	NPFIVIC	Walleye pollock - Aleutian Islands	О	Assessment	Y	
AFSC	NPFMC	Walleye pollock - Eastern Bering	6	Operational Stock	Υ	
Arsc	INITIVIC	Sea	0	Assessment	'	
AFSC	NPFMC	Walleye pollock - Western /	6	Operational Stock	Υ	
71130	MITIME	Central Gulf of Alaska		Assessment	,	
AFSC	NPFMC	Yelloweye rockfish - Gulf of Alaska	3	Operational Stock	Υ	
		·		Assessment		
AFSC	NPFMC	Yellowfin sole - Bering Sea /	6	Operational Stock	Υ	
		Aleutian Islands		Assessment		
SEFSC	HMS	Blacktip shark - Gulf of Mexico	6	Operational Stock Assessment	Υ	
Completed A	csassmants	for FSSI Stocks - FY2019 Quarte	r 2 (Jani		1	
Science	13303311101103	10113313tocks - 112013 Quarte	Asmt	uary - iviaren, 2013	', 	
Center(s) ¹	Jurisdiction ²	Stock	Level ³	Asmt Type ⁴	Adequate	Notes
AFSC	NPFMC	Red king crab - Norton Sound	5	Operational Stock	Υ	Not on initial schedule
				Assessment	·	
NEFSC	NEFMC /	Summer flounder - Mid-Atlantic	6	Operational Stock	Υ	
	MAFMC	Coast		Assessment		
NWFSC /	PFMC	Chinook salmon - California Central	3	Operational Stock	Υ	
SWFSC	PFIVIC	Valley: Sacramento River Fall	3	Assessment	Y	
NWFSC /	PFMC	Chinook salmon - Northern	4	Operational Stock	Υ	
SWFSC		California Coast: Klamath River Fall	_	Assessment	·	
65500	6145146		_	Operational Stock		
SEFSC	GMFMC	Brown shrimp - Gulf of Mexico	5	Assessment	Y	
CEECO	CNATNAC	Dink chrima Culf of Manie	-	Operational Stock		
SEFSC	GMFMC	Pink shrimp - Gulf of Mexico	5	Assessment	Y	
SEFSC	GMFMC	White shrimp - Gulf of Mexico	5	Operational Stock	Υ	
				Assessment	_ '	
	ssessments	for FSSI Stocks - FY2019 Quarte		il - June, 2019)	1	
Science	, , , , ,		Asmt	<u> </u>		<u></u> .
Center(s) ¹	Jurisdiction ²	Stock	Level ³	Asmt Type ⁴	Adequate	Notes
AFSC	NPFMC	Blue king crab - Pribilof Islands	2	Operational Stock	N	
		=		Assessment		

risdiction ²	Stock Golden king crab - Eastern Aleutian Islands Golden king crab - Western Aleutian Islands Pacific chub mackerel - Pacific Pacific sardine - Pacific for FSSI Stocks - FY2019 Quarter Stock Black sea bass - Mid-Atlantic Coast	Asmt Level ³ 5 6 6 r 4 (July Asmt Level ³	Asmt Type ⁴ Operational Stock Assessment - September, 201	Adequate Y Y Y Y Y 9)	Notes Not on initial Schedule Not on initial Schedule
NPFMC PFMC PFMC essments risdiction ² MAFMC	Golden king crab - Eastern Aleutian Islands Golden king crab - Western Aleutian Islands Pacific chub mackerel - Pacific Pacific sardine - Pacific for FSSI Stocks - FY2019 Quarter	5 6 6 r 4 (July	Operational Stock Assessment Operational Stock Assessment Operational Stock Assessment Operational Stock Assessment	Y Y Y	Not on initial Schedule
PFMC PFMC essments risdiction ² MAFMC	Aleutian Islands Golden king crab - Western Aleutian Islands Pacific chub mackerel - Pacific Pacific sardine - Pacific for FSSI Stocks - FY2019 Quarter Stock	5 6 6 r 4 (July Asmt	Assessment Operational Stock Assessment Operational Stock Assessment Operational Stock Assessment	Y	
PFMC PFMC essments risdiction ² MAFMC	Golden king crab - Western Aleutian Islands Pacific chub mackerel - Pacific Pacific sardine - Pacific for FSSI Stocks - FY2019 Quarter Stock	6 6 r 4 (July Asmt	Operational Stock	Y	Not on initial Schedule
PFMC PFMC essments risdiction ² MAFMC	Aleutian Islands Pacific chub mackerel - Pacific Pacific sardine - Pacific for FSSI Stocks - FY2019 Quarter Stock	6 6 r 4 (July Asmt	Assessment Operational Stock Assessment Operational Stock Assessment	Y	Not on initial Schedule
PFMC essments risdiction ² MAFMC	Pacific chub mackerel - Pacific Pacific sardine - Pacific for FSSI Stocks - FY2019 Quarter Stock	6 r 4 (July Asmt	Operational Stock Assessment Operational Stock Assessment	Y	
PFMC essments risdiction ² MAFMC	Pacific sardine - Pacific for FSSI Stocks - FY2019 Quarter Stock	6 r 4 (July Asmt	Assessment Operational Stock Assessment	Y	
essments risdiction ² MAFMC	for FSSI Stocks - FY2019 Quarter Stock	r 4 (July Asmt	Operational Stock Assessment		
essments risdiction ² MAFMC	for FSSI Stocks - FY2019 Quarter Stock	r 4 (July Asmt	Assessment		
risdiction ²	Stock	Asmt		9)	
MAFMC					
MAFMC		Level ³			
	Plack son bass, Mid Atlantic Con-t		Asmt Type⁴	Adequate	Notes
		6	Operational Stock	Υ	
NA EN 4C	Black Sea bass - Mid-Atlantic Coast	U	Assessment	I	
IVIACIVIL	Bluefish - Atlantic Coast	6	Operational Stock	Υ	
	Didensit Attance edast	Ů	Assessment	·	
MAFMC	Scup - Atlantic Coast	6	Operational Stock	Υ	
	Atlantic and Fastorn Goorges		Assessment Operational Stock		
NEFMC	=	4	-	Υ	Conducted by the TRAC
	·				
NEFMC	_	2	•	N	Not on initial Schedule
NEFMC	•	2	•	N	Not on initial Schedule
NEFMC	Haddock - Eastern Georges Bank	4	•	Y	Conducted by the TRAC
	Little skate - Georges Bank /	_	Operational Stock		
NEFMC	_	2	Assessment	N	Not on initial Schedule
NEEDAG	Rosette skate - Georges Bank /		Operational Stock		New and total Calculated
NEFIVIC	Southern New England	2	Assessment	N	Not on initial Schedule
NIEEMC	Smooth skate - Georges Bank /	2	Operational Stock	N	Not on initial Schedule
IVEFIVIC	Southern New England	2	Assessment	IN	Not on initial schedule
NIEEMC	Thorny skate - Georges Bank /	2	Operational Stock	N	Not on initial Schedule
IVEFIVIC	Southern New England		Assessment	IN.	Not on initial schedule
NFFMC	_	2	Operational Stock	N	Not on initial Schedule
	Southern New England	_			
NEFMC	Yellowtail flounder - Georges Bank	2	•	N	
-		2	•	N	Not on initial Schedule
-		2	•	N	Not on initial Schedule
VIAFIVIC	Bank / Mid-Atlantic				
PFMC	Black rockfish - California	6	•	Y	Not on initial Schedule
PFMC	Black rockfish - Oregon	6		Y	Not on initial Schedule
PFMC	Black rockfish - Washington	6	•	Y	Not on initial Schedule
	Blackgill rockfish - Southern		•		
PFMC	_	6	•	Y	Not on initial Schedule
N N N N N N N F F F F F	JEFMC	Bank Barndoor skate - Georges Bank / Southern New England Clearnose skate - Georges Bank / Southern New England BEFMC Haddock - Eastern Georges Bank / Southern New England BEFMC Little skate - Georges Bank / Southern New England Rosette skate - Georges Bank / Southern New England Smooth skate - Georges Bank / Southern New England Thorny skate - Georges Bank / Southern New England Winter skate - Georges Bank / Southern New England Winter skate - Georges Bank / Southern New England Winter skate - Georges Bank / Southern New England BEFMC Yellowtail flounder - Georges Bank EFMC / Goosefish - Gulf of Maine / Northern Georges Bank EFMC / Black rockfish - Southern Georges Black rockfish - California PFMC Black rockfish - Oregon Black rockfish - Washington Blackgill rockfish - Southern	Bank Bank Barndoor skate - Georges Bank / Southern New England BEFMC Clearnose skate - Georges Bank / Southern New England BEFMC Battle skate - Georges Bank / Southern New England BEFMC BEFMC Couthern New England BEFMC Couthern New England BEFMC Couthern New England Couth	Bank	IEFMC Bank Assessment Y

Science			Asmt			
Center(s) ¹	Jurisdiction ²	Stock	Level ³	Asmt Type ⁴	Adequate	Notes
NWFSC / SWFSC	PFMC	Blackspotted and Rougheye Rockfish Complex	6	Stock Monitoring Analysis	Y	Not on initial Schedul
NWFSC / SWFSC	PFMC	California Blue and Deacon Rockfish Complex	6	Stock Monitoring Analysis	Υ	Not on initial Schedu
NWFSC / SWFSC	PFMC	Cabezon - Northern Califnornia	6	Operational Stock Assessment	Υ	Not on initial Schedu
NWFSC / SWFSC	PFMC	Cabezon - Southern California	6	Operational Stock Assessment	Υ	Not on initial Schedu
NWFSC / SWFSC	PFMC	Cowcod - Southern California	3	Operational Stock Assessment	Υ	
NWFSC / SWFSC	PFMC	Darkblotched rockfish - Pacific Coast	6	Stock Monitoring Analysis	Y	Not on initial Schedu
NWFSC / SWFSC	PFMC	Dover sole - Pacific Coast	6	Stock Monitoring Analysis	Υ	Not on initial Schedu
NWFSC / SWFSC	PFMC	Gopher rockfish - Northern California	6	Operational Stock Assessment	Υ	Assessed as a comple with Black and yellow rockfish
NWFSC / SWFSC	PFMC	Lingcod - Northern Pacific Coast	6	Stock Monitoring Analysis	Υ	Not on initial Schedu
NWFSC / SWFSC	PFMC	Lingcod - Southern Pacific Coast	6	Stock Monitoring Analysis	Y	Not on initial Schedu
NWFSC / SWFSC	PFMC	Longnose skate - Pacific Coast	6	Operational Stock Assessment	Y	
NWFSC / SWFSC	PFMC	Longspine thornyhead - Pacific Coast	6	Stock Monitoring Analysis	Y	Not on initial Schedu
NWFSC / SWFSC	PFMC	Petrale sole - Pacific Coast	6	Operational Stock Assessment	Y	Delayed from Q3
NWFSC / SWFSC	PFMC	Sablefish - Pacific Coast	6	Operational Stock Assessment	Y	
NWFSC / SWFSC	PFMC	Widow rockfish - Pacific Coast	6	Operational Stock Assessment	Y	Delayed from Q3
PIFSC	WPFMC	American Samoa Bottomfish Multi- species Complex	3	Operational Stock Assessment	Y	Delayed from Q3
PIFSC	WPFMC	Guam Bottomfish Multi-species Complex	3	Operational Stock Assessment	Y	Delayed from Q3
PIFSC	WPFMC	Northern Mariana Islands Bottomfish Multi-species Complex	3	Operational Stock Assessment	Υ	Delayed from Q3

Footnotes

- 1 NOAA Fisheries Science Centers include Alaska Fisheries Science Center (AFSC), Northeast Fisheries Science Center (NEFSC), Northwest Fisheries Science Center (NWFSC), Pacific Islands Fisheries Science Center (PIFSC), Southeast Fisheries Science Center (SEFSC) and Southwest Fisheries Science Center (SWFSC). In some cases, assessments are conducted by multiple science centers (e.g. NW/SW and SW/PI).
- 2 Jurisdictions include Caribbean Fishery Management Council (CFMC), Gulf of Mexico Fishery Management Council (GMFMC), Atlantic Highly Migratory Species Division (HMS), Mid-Atlantic Fishery Management Council (MAFMC), New England Fishery Management Council (NEFMC), North Pacific Fishery Management Council (NPFMC), Pacific Fishery Management Council (PFMC), South Atlantic Fishery Management Council (SAFMC) and Western Pacific Fishery Management Council (WPFMC).
- 3 Assessment Model Category: Category of stock assessment model accepted for use in management, as described in the 2018 Next Generation Stock Assessment Improvement Plan document.
- 1 = Data-Limited (e.g. DBSRA, DCAC, Surplus Production MSY, Egg-Escapement, Mean Length Estimation)
- 2 = Index-Based (e.g. AIM, basic linear models and time series analyses)
- 3 = Aggregate Biomass Dynamics (e.g. Schaefer or Pella-Tomlinson Production Models, ASPIC, delay-difference models)
- 4 = Virtual Population Analysis (e.g. ADAPT, VPA-2BOX)
- 5 = Statistical Catch-at-Length (e.g. SCALE, SS, MultifanCL)
- 6 = Statistical Catch-at-Age (e.g. SS, ASAP, AMAK, BAM, MultifanCL, CASAL)
- 4 For FY19, the National Stock Assessment Program is adapting how it tracks and classifies its activities related to the provision of harvest recommendations. The changes reflect the guidance established in the 2018 Next Generation Stock Assessment Improvement Plan document.

Operational Stock Assessment - Activities labeled "Operational Stock Assessments" include analyses that utilize one or more of the categories of stock assessment models described in the "Model Class" field (Footnote 4). Within the range of Operational Stock Assessments will be first time applications of previously researched methods ("new" or "benchmark" assessments); applications with updated data streams and minor revisions to methods within the scope of previously researched themes; and applications that simply update the model with the most recent data.

Stock Monitoring Analysis - Activities labeled "Stock Monitoring Analyses" generally include activities that provide stock-level advice to fishery managers between stock assessments. These analyses include the methods described in the "Model Class" field (Footnote 3), but only when they are updated using the most recent catch information to develop new catch advice. These are sometimes called partial updates. Because there are no changes in the methods or data series in Stock Monitoring Analysiss, just updated catch data, the conduct and review of these analyses does not warrant intense scrutiny.

* Changes in the assessment schedule are indicated by red font.

Appendix B. Assessment activity for non-FSSI stocks, stock complexes and complex members by quarter for FY2019.

	and complex members by quarter for 1 12017.									
Complete	d Assessmer	ts for Non-FSSI Stocks - FY2019 Qu	arter 1	(October - Decemb	er, 2018)					
Science			Model	Asmt Type ⁴						
Center(s) ¹	Jurisdiction ²	Stock	Class ³	Asilit Type	Notes on Assessment					
AFSC	NPFMC	Bering Sea / Aleutian Islands Other	3	Stock Monitoring						
AF3C	INFFINIC	Flatfish Complex	3	Analysis						
AFSC	NPFMC	Bering Sea / Aleutian Islands Other	3	Operational Stock						
Aisc	INTTIVIC	Rockfish Complex	,	Assessment						
AFSC	NPFMC	Bering Sea / Aleutian Islands Other	3	Operational Stock						
711 30	THE THE	Skates Complex	Ĵ	Assessment						
AFSC	NPFMC	Giant octopus - Bering Sea / Aleutian	1	Operational Stock						
		Islands	_	Assessment						
AFSC	NPFMC	Gulf of Alaska Other Shallow Water	3	Stock Monitoring						
700		Flatfish Complex		Analysis						
AFSC	NPFMC	Gulf of Alaska Shark Complex	3	Operational Stock						
		•		Assessment						
AFSC	NPFMC	Kamchatka flounder - Bering Sea /	6	Operational Stock						
		Aleutian Islands		Assessment						
AFSC	NPFMC	Pacific cod - Aleutian Islands	3	Operational Stock						
				Assessment						
AFSC	NPFMC	Shortraker rockfish - Bering Sea /	3	Operational Stock						
		Aleutian Islands		Assessment						
AFSC	NPFMC	Walleye pollock - Bogoslof	3	Operational Stock						
				Assessment						
AFSC	NPFMC	Walleye pollock - Southeast Gulf of	3	Operational Stock						
		Alaska		Assessment						
SEFSC	HMS	Bigeye tuna - Atlantic	6	Operational Stock	Not on the initial schedule					
				Assessment						
SEFSC	HMS	Blue marlin - Atlantic	6	Operational Stock Assessment	Not on the initial schedule					
Complete	d Accoccmon	its for Non-FSSI Stocks - FY2019 Qu	ortor 3		0010)					
_	u Assessiner	115 101 NOII-F331 310CKS - F12019 Qu		(January - March, 2	.019)					
Science			Model	Asmt Type ⁴						
Center(s) ¹	Jurisdiction ²	Stock	Class ³	7,1	Notes on Assessment					
INIT	Non Fodoral	Pacific Halibut - Pacific Coast	_	Operational Stock						
INT	Non-Federal	Pacific Halibut - Pacific Coast	6	Assessment						
NWFSC /	25140	Chinook salmon - California Central		Operational Stock						
SWFSC	PFMC	Valley: Sacramento River Spring	2	Assessment						
NWFSC /	DE1.46	Chinook salmon - California Central		Operational Stock						
SWFSC	PFMC	Valley: Sacramento River Winter	4	Assessment						
NWFSC /	DEN 4.0	Chinook salmon - Columbia River		Operational Stock						
SWFSC	PFMC	Basin: Lower River Hatchery Fall	4	Assessment						
NWFSC /	DENAC	Chinook salmon - Columbia River	_	Operational Stock						
SWFSC	PFMC	Basin: Lower River Hatchery Spring	2	Assessment						
NIMESC /		Chinook salmon - Columbia River		Operational Steel						
NWFSC /	PFMC		4	Operational Stock						
SWFSC		Basin: Mid-River Bright Hatchery Fall		Assessment						
NWFSC /	PFMC	Chinook salmon - Columbia River	4	Operational Stock						
SWFSC	FFIVIC	Basin: North Lewis River Fall	-	Assessment						

Complete	d Assessmer	nts for Non-FSSI Stocks - FY2019 Qu	arter 2	(January - March, 2	019)
Science Center(s) ¹	Jurisdiction ²	Stock	Model Class ³	Asmt Type⁴	Notes on Assessment
NWFSC / SWFSC	PFMC	Chinook salmon - Columbia River Basin: Snake River Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Columbia River Basin: Snake River Spring/Summer	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Columbia River Basin: Spring Creek Hatchery Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Columbia River Basin: Upper River Bright Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Columbia River Basin: Upper River Spring	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Columbia River Basin: Upper River Summer	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Columbia River Basin: Upper Willamette Spring	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Northern California Coast: California Coastal	2	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Oregon Coast: Central and Northern Oregon	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Oregon Coast: Southern Oregon	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Cedar River Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Eastern Strait of Juan de Fuca Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Green River Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Mid Hood Canal Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Nisqually River Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Nooksack Spring Early	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Puyallup Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Skagit Spring	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Skagit Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Skokomish Summer/Fall	2	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Snohomish Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: Stillaguamish Summer/Fall	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Chinook salmon - Puget Sound: White River Spring	3	Operational Stock Assessment	

Completed	d Assessmer	its for Non-FSSI Stocks - FY2019 Qu	arter 2	(January - March, 2	019)
Science Center(s) ¹	Jurisdiction ²	Stock	Model Class ³	Asmt Type ⁴	Notes on Assessment
NWFSC /	PFMC	Chinook salmon - Washington Coast:	4	Operational Stock	rotes on Assessment
SWFSC	FTIVIC	Grays Harbor Fall	7	Assessment	
NWFSC /	PFMC	Chinook salmon - Washington Coast:	4	Operational Stock	
SWFSC	PFIVIC	Grays Harbor Spring	4	Assessment	
NWFSC /	DEMC	Chinook salmon - Washington Coast:	4	Operational Stock	
SWFSC	PFMC	Hoh Fall	4	Assessment	
NWFSC/	DEMAG	Chinook salmon - Washington Coast:	4	Operational Stock	
SWFSC	PFMC	Hoh Spring/Summer	4	Assessment	
NWFSC/	DEN 4.0	Chinook salmon - Washington Coast:		Operational Stock	
SWFSC	PFMC	Hoko Summer/Fall	4	Assessment	
NWFSC/		Chinook salmon - Washington Coast:	_	Operational Stock	
SWFSC	PFMC	Queets Fall	4	Assessment	
NWFSC /		Chinook salmon - Washington Coast:		Operational Stock	
SWFSC	PFMC	Queets Spring/Summer	4	Assessment	
NWFSC /		Chinook salmon - Washington Coast:		Operational Stock	
SWFSC	PFMC	Quillayute Fall	4	Assessment	
NWFSC /		Chinook salmon - Washington Coast:		Operational Stock	
SWFSC	PFMC	Quillayute Spring/Summer	4	Assessment	
NWFSC /		Chinook salmon - Washington Coast:		Operational Stock	
SWFSC	PFMC	Quinault Fall Hatchery	2	Assessment	
NWFSC /		Chinook salmon - Washington Coast:		Operational Stock	
SWFSC	PFMC	Willapa Bay Fall Hatchery	4	Assessment	
NWFSC /	PFMC	Chinook salmon - Washington Coast:	4	Operational Stock	
SWFSC		Willapa Bay Fall Natural		Assessment	
NWFSC /	PFMC	Coho salmon - Oregon Production	2	Operational Stock	
SWFSC		Index Area: Central California Coast		Assessment	
NWFSC /	DE1.40	Coho salmon - Oregon Production		Operational Stock	
SWFSC	PFMC	Index Area: Columbia River Early	4	Assessment	
		Hatchery			
NWFSC /		Coho salmon - Oregon Production	_	Operational Stock	
SWFSC	PFMC	Index Area: Columbia River Late	4	Assessment	
		Hatchery			
NWFSC /		Coho salmon - Oregon Production		Operational Stock	
SWFSC	PFMC	Index Area: Lower Columbia Natural	2	Assessment	
NWFSC /	PFMC	Coho salmon - Oregon Production	4	Operational Stock	
SWFSC		Index Area: Oregon Coast Hatchery		Assessment	
NWFSC /	PFMC	Coho salmon - Oregon Production	4	Operational Stock	
SWFSC		Index Area: Oregon Coast Natural	·	Assessment	
NWFSC /		Coho salmon - Oregon Production		Operational Stock	
SWFSC	PFMC	Index Area: Southern	2	Assessment	
		Oregon/Northern California Coast			
NWFSC /	PFMC	Coho salmon - Puget Sound: Hood	4	Operational Stock	
SWFSC	i i iviC	Canal		Assessment	
NWFSC /	PFMC	Coho salmon - Puget Sound: Skagit	3	Operational Stock	
SWFSC	FIIVIC	Cono Sannon - Fuget Sound. Skagit	3	Assessment	
NWFSC /	DEMAC	Coho salmon - Puget Sound:		Operational Stock	
SWFSC	PFMC	Snohomish	3	Assessment	

Complete	d Assessmer	nts for Non-FSSI Stocks - FY2019 Qu	arter 2	(January - March, 2	019)
Science Center(s) ¹	Jurisdiction ²	Stock	Model Class ³	Asmt Type⁴	Notes on Assessment
NWFSC / SWFSC	PFMC	Coho salmon - Puget Sound: South Puget Sound Hatchery	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Puget Sound: Stillaguamish	4	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Grays Harbor	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Hoh	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Queets	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Quillayute Fall	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Quillayute Summer Hatchery	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Quinault Hatchery	2	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Strait of Juan de Fuca	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Willapa Bay Hatchery	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Coho salmon - Washington Coast: Willapa Bay Natural	3	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Pacific hake - Pacific Coast	6	Operational Stock Assessment	
NWFSC / SWFSC	PFMC	Pink salmon - Puget Sound	4	Operational Stock Assessment	
PIFSC	WPFMC	Spanner crab - Main Hawaiian Islands	3	Operational Stock Assessment	
Complete	d Assessmer	nts for Non-FSSI Stocks - FY2019 Qu	arter 3	(April - June, 2019)	
Science Center(s) ¹	Jurisdiction ²	Stock	Model Class ³	Asmt Type⁴	Notes on Assessment
AFSC	NPFMC	Weathervane scallop - Alaska	2	Operational Stock Assessment	
PIFSC	WPFMC	Big-eye bream - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex
PIFSC	WPFMC	Blacktail snapper - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex
PIFSC	WPFMC	Bluefin trevally - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex
PIFSC	WPFMC	Bluespine unicornfish - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex
PIFSC	WPFMC	Filament-finned parrotfish - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex
PIFSC	WPFMC	Humpback snapper - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex

Complete	d Assessmer	nts for Non-FSSI Stocks - FY2019 Qu	arter 3	(April - June, 2019)					
Science Center(s) ¹	Jurisdiction ²	Stock	Model Class ³	Asmt Type⁴	Notes on Assessment				
PIFSC	WPFMC	Island jack - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex				
PIFSC	WPFMC	Longface emperor - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex				
PIFSC	WPFMC	Pacific longnose parrotfish - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex				
PIFSC	WPFMC	Redlip parrotfish - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex				
PIFSC	WPFMC	Steephead parrotfish - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex				
PIFSC	WPFMC	Yellowlip emperor - Guam	1	Operational Stock Assessment	Guam Ecosystem Mult-species Complex				
Completed Assessments for Non-FSSI Stocks - FY2019 Quarter 4 (July - September, 2019)									
Science Center(s) ¹	Jurisdiction ²	Stock	Model Class ³	Asmt Type⁴	Notes on Assessment				
AFSC	NPFMC	Coho salmon - Auke Creek	6	Operational Stock Assessment					
AFSC	NPFMC	Coho salmon - Berners River	6	Operational Stock Assessment					
AFSC	NPFMC	Coho salmon - Hugh Smith Lake	6	Operational Stock Assessment					
NEFSC	NEFMC	Atlantic salmon - Gulf of Maine	2	Operational Stock Assessment	Initially listed as an FSSI stock in error				
NWFSC / SWFSC	PFMC	Big Skate - Pacific Coast	6	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Cabezon - Oregon	6	Operational Stock Assessment	Not on initial Schedule				
NWFSC / SWFSC	PFMC	Cabezon - Washington	1	Operational Stock Assessment	Not on initial Schedule				
NWFSC / SWFSC	PFMC	China rockfish - Central Paicifc Coast	6	Stock Monitoring Analysis	Not on initial Schedule				
NWFSC / SWFSC	PFMC	China rockfish - Northern Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule				
NWFSC / SWFSC	PFMC	China rockfish - Southern Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule				
PIFSC	WPFMC	Oceanic whitetip shark - Western and Central Pacific	6	Operational Stock Assessment					
PIFSC	WPFMC	Skipjack tuna - Western and Central Pacific	6	Operational Stock Assessment					
PIFSC	WPFMC	Striped marlin - Western and Central Pacific	6	Operational Stock Assessment					

Footnotes

- 1 NOAA Fisheries Science Centers include Alaska Fisheries Science Center (AFSC), Northeast Fisheries Science Center (NEFSC), Northwest Fisheries Science Center (NWFSC), Pacific Islands Fisheries Science Center (PIFSC), Southeast Fisheries Science Center (SEFSC) and Southwest Fisheries Science Center (SWFSC). In some cases, assessments are conducted by multiple science centers (e.g. NW/SW and SW/PI).
- 2 Jurisdictions include Caribbean Fishery Management Council (CFMC), Gulf of Mexico Fishery Management Council (GMFMC), Atlantic Highly Migratory Species Division (HMS), Mid-Atlantic Fishery Management Council (MAFMC), New England Fishery Management Council (NEFMC), North Pacific Fishery Management Council (NPFMC), Pacific Fishery Management Council (PFMC), South Atlantic Fishery Management Council (SAFMC) and Western Pacific Fishery Management Council (WPFMC).
- 3 Assessment Model Category: Category of stock assessment model accepted for use in management, as described in the 2018 Next Generation Stock Assessment Improvement Plan document.
- 1 = Data-Limited (e.g. DBSRA, DCAC, Surplus Production MSY, Egg-Escapement, Mean Length Estimation)
- 2 = Index-Based (e.g. AIM, basic linear models and time series analyses)
- 3 = Aggregate Biomass Dynamics (e.g. Schaefer or Pella-Tomlinson Production Models, ASPIC, delay-difference models)
- 4 = Virtual Population Analysis (e.g. ADAPT, VPA-2BOX)
- 5 = Statistical Catch-at-Length (e.g. SCALE, SS, MultifanCL)
- 6 = Statistical Catch-at-Age (e.g. SS, ASAP, AMAK, BAM, MultifanCL, CASAL)
- 4 For FY19, the National Stock Assessment Program is adapting how it tracks and classifies its activities related to the provision of harvest recommendations. The changes reflect the guidance established in the 2018 Next Generation Stock Assessment Improvement Plan document.

Operational Stock Assessment - Activities labeled "Operational Stock Assessments" include analyses that utilize one or more of the categories of stock assessment models described in the "Model Class" field (Footnote 4). Within the range of Operational Stock Assessments will be first time applications of previously researched methods ("new" or "benchmark" assessments); applications with updated data streams and minor revisions to methods within the scope of previously researched themes; and applications that simply update the model with the most recent data.

Stock Monitoring Analysis - Activities labeled "Stock Monitoring Analyses" generally include activities that provide stock-level advice to fishery managers between stock assessments. These analyses include the methods described in the "Model Class" field (Footnote 3), but only when they are updated using the most recent catch information to develop new catch advice. These are sometimes called partial updates. Because there are no changes in the methods or data series in Stock Monitoring Analysiss, just updated catch data, the conduct and review of these analyses does not warrant intense scrutiny.

* Changes in the assessment schedule are indicated by red font.

Appendix C. Planned assessments for FSSI and non-FSSI stocks for by quarter for FY 2019. Information is best available provided by NOAA Fisheries Science Centers and subject to change.

Planned A	Assessment	s for FSSI a	and Non-FSSI Stocks - FY 2019 Quarter 1	(Octobe	r - December,	2018)	
Science		FSSI /		Model	Planned	•	
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type ⁵	Notes	
					Stock		
AFSC	NPFMC	FSSI	Alaska plaice - Bering Sea / Aleutian Islands	6	Monitoring		
					Analysis		
					Operational		
AFSC	NPFMC	FSSI	Alaska skate - Bering Sea / Aleutian Islands	6	Stock		
					Assessment		
			Arrowtooth flounder - Bering Sea / Aleutian		Operational		
AFSC	NPFMC	FSSI	Islands	6	Stock	CIE Reviewed	
			isianus		Assessment		
					Stock		
AFSC	NPFMC	FSSI	Arrowtooth flounder - Gulf of Alaska	6	Monitoring		
					Analysis		
					Operational		
AFSC	NPFMC	FSSI	Atka mackerel - Bering Sea / Aleutian Islands	6	Stock		
					Assessment		
		1C FSSI		Bering Sea / Aleutian Islands Blackspotted		Operational	
AFSC	NPFMC		and Rougheye Rockfish Complex	6	Stock		
			and Rougheye Rockhish complex		Assessment		
			n-FSSI Bering Sea / Aleutian Islands Other Flatfish Complex		Stock		
AFSC	NPFMC	Non-FSSI		3	Monitoring		
			complex		Analysis		
			Bering Sea / Aleutian Islands Other Rockfish		Operational		
AFSC	NPFMC	Non-FSSI	Complex	3	Stock		
			complex		Assessment		
			Bering Sea / Aleutian Islands Other Skates		Operational		
AFSC	NPFMC	MC Non-FSSI	Complex	3	Stock		
			Соттрых		Assessment		
					Operational		
AFSC	NPFMC	FSSI	Blue king crab - Saint Matthew Island	5	Stock		
					Assessment		
					Stock		
AFSC	NPFMC	FSSI	Dover sole - Gulf of Alaska	6	Monitoring		
					Analysis		
					Operational		
AFSC	NPFMC	FSSI	Dusky rockfish - Gulf of Alaska	6	Stock		
					Assessment		
					Operational		
AFSC	NPFMC	FSSI	Flathead sole - Bering Sea / Aleutian Islands	6	Stock		
					Assessment		
					Stock		
AFSC	NPFMC	FSSI	Flathead sole - Gulf of Alaska	6	Monitoring		
					Analysis		

Planned A	Assessment	s for FSSI a	and Non-FSSI Stocks - FY 2019 Quarter 1	(October	- December,	2018)	
Science		FSSI /		Model	Planned		
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class⁴	Asmt Type ⁵	Notes	
					Operational		
AFSC	NPFMC	Non-FSSI	 Giant octopus - Bering Sea / Aleutian Islands	2	Stock		
Aisc	IVITIVIE	14011 1 331	Glant octopus Bernig Sca / Alcatian Islands	_	Assessment		
					Operational		
AFSC	NPFMC	NDEMC	FSSI	Greenland halibut - Bering Sea / Aleutian	6	Stock	
Aisc		1 331	Islands	Ü	Assessment		
					Stock		
AFSC	NPFMC	FSSI	Gulf of Alaska Blackspotted and Rougheye	6	Monitoring		
Aisc	IVITIVIC	1 331	Rockfish Complex	Ü	Analysis		
					Stock		
AFSC	NPFMC	Non-FSSI	Gulf of Alaska Other Shallow Water Flatfish	3	Monitoring		
AFSC	INFFIVIC	11011-1331	Complex	3	_		
					Analysis Operational		
AFSC	NPFMC	Non-FSSI	Culf of Alaska Shark Complex	3	Stock		
AFSC	INPFIVIC	11011-F331	Gulf of Alaska Shark Complex	3			
					Assessment		
4500	NIDENAC	Name ECCI	Kamchatka flounder - Bering Sea / Aleutian	6	Operational		
AFSC	NPFMC	1C Non-FSSI	Islands	6	Stock		
					Assessment		
		NPFMC FSSI	Northern rock sole - Bering Sea / Aleutian	_	Operational		
AFSC	NPFMC		Islands	6	Stock		
					Assessment		
					Operational		
AFSC	NPFMC	FSSI	Northern rock sole - Gulf of Alaska	6	Stock		
					Assessment		
			FSSI Northern rockfish - Bering Sea / Aleutian Islands	_	Stock		
AFSC	NPFMC	FSSI		6	Monitoring		
					Analysis		
			Northern rockfish - Western / Central Gulf		Operational		
AFSC	NPFMC	NPFMC FSSI	of Alaska	6	Stock		
					Assessment		
					Operational		
AFSC	NPFMC	Non-FSSI	Pacific cod - Aleutian Islands	3	Stock		
					Assessment		
					Operational		
AFSC	NPFMC	FSSI	Pacific cod - Bering Sea	6	Stock		
					Assessment		
					Operational		
AFSC	NPFMC	FSSI	Pacific cod - Gulf of Alaska	6	Stock		
					Assessment		
			Pacific ocean perch - Bering Sea / Aleutian		Operational		
AFSC	NPFMC	FSSI	Islands	6	Stock		
					Assessment		
					Stock		
AFSC	NPFMC	FSSI	Pacific ocean perch - Gulf of Alaska	6	Monitoring		
					Analysis		
					Operational		
AFSC	NPFMC	FSSI	Red king crab - Bristol Bay	5	Stock		
					Assessment		

Planned A	Assessment	s for FSSI a	and Non-FSSI Stocks - FY 2019 Quarter 1	(October	- December,	2018)
Science		FSSI /		Model	Planned	
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type⁵	Notes
. ,					Stock	
AFSC	NPFMC	FSSI	Rex sole - Gulf of Alaska	6	Monitoring	
Aisc	INITIVIC	1 331	Nex 301c Gull Of Alaska		Analysis	
					Stock	
AFSC	NPFMC	FSSI	Rock sole - Gulf of Alaska	6	Monitoring	
Aisc	INITIVIC	1 331	Nock sole - Gull of Alaska		Analysis	
					Operational	
AFSC	NPFMC	FSSI	Sablefish - Eastern Bering Sea / Aleutian	6	Stock	
Aisc	INITIVIC	INPFIVIC F331	Islands / Gulf of Alaska		Assessment	
					Operational	
AFSC	NPFMC	Non-FSSI	Shortraker rockfish - Bering Sea / Aleutian	3	Stock	
AISC	INFIIVIC	14011-1 331	Islands	3	Assessment	
					Operational	
AFSC	NPFMC	FSSI	Shortspine thornyhead - Gulf of Alaska	3	Stock	
AF3C	INFFIVIC	ГЭЭГ	Shortspille thornyhead - Guli Or Alaska	3		
					Assessment	
۸۳۵۵	NDEMC	ECC!	Snow arch Daving Con	_	Operational	
AFSC	NPFMC	PFMC FSSI	Snow crab - Bering Sea	5	Stock	
					Assessment	
٨٣٥٥	NIDENAC	ECC!	Southorn Tannor crab Boring Soa	_	Operational	
AFSC	NPFMC	FSSI	Southern Tanner crab - Bering Sea	5	Stock	
					Assessment	
4.500		5001			Operational	
AFSC	NPFMC	FSSI	Walleye pollock - Aleutian Islands	6	Stock	
					Assessment	
4500	NIDENAG	N FCCI		2	Operational	
AFSC	NPFMC	C Non-FSSI	Walleye pollock - Bogoslof	3	Stock	
					Assessment	
4500	NIDENAG	FCCI			Operational	
AFSC	NPFMC	IC FSSI	Walleye pollock - Eastern Bering Sea	6	Stock	
					Assessment	
4500	NIDENAG			2	Operational	
AFSC	NPFMC	Non-FSSI	Walleye pollock - Southeast Gulf of Alaska	3	Stock	
					Assessment	
4500	NIDENAC	ECCI	Walleye pollock - Western / Central Gulf of		Operational	
AFSC	NPFMC	FSSI	Alaska	6	Stock	
					Assessment	
٨٥٥	NIDENAC	ECCI	Vallance of all field Could at Alaska	_	Operational	
AFSC	NPFMC	FSSI	Yelloweye rockfish - Gulf of Alaska	3	Stock	
					Assessment	
٨٥٥	NIDENAC	ECCI	Vallandia ada Darina Caa / Alantian Ialanda		Operational	
AFSC	NPFMC	FSSI	Yellowfin sole - Bering Sea / Aleutian Islands	6	Stock	
					Assessment	
CEECO	110.40	Non Ecci	Discuss Assess Addressed	_	Operational	Not on initial
SEFSC	HMS	S Non-FSSI	Bigeye tuna - Atlantic	6	Stock	Schedule
					Assessment	
CEECO	110.40	ECCI			Operational	Deleved for the EVAC
SEFSC	HMS	FSSI	Blacktip shark - Gulf of Mexico	6	Stock	Delayed from FY18
					Assessment	

Planned A	Planned Assessments for FSSI and Non-FSSI Stocks - FY 2019 Quarter 2 (January - March, 2019)									
Science		FSSI /		Model	Planned					
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type ⁵	Notes				
SEFSC	HMS	Non-FSSI	Blue marlin - Atlantic	6	Operational Stock Assessment	Not on initial Schedule				
SEFSC	SAFMC	FSSI	Greater amberjack Southern Atlantic Coast	6	Operational Stock Assessment	Delayed to Quarter Three				
INT	Non-Federal	Non-FSSI	Pacific Halibut - Pacific Coast	6	Operational Stock Assessment					
AFSC	NPFMC	FSSI	Red king crab - Norton Sound	5	Operational Stock Assessment	Not on initial Schedule				
NEFSC	MAFMC	FSSI	Summer flounder - Mid-Atlantic Coast	6	Operational Stock Assessment	CIE Reviewed				
NWFSC / SWFSC	PFMC	FSSI	Chinook salmon - California Central Valley: Sacramento River Fall	3	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - California Central Valley: Sacramento River Spring	2	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - California Central Valley: Sacramento River Winter	4	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin: Lower River Hatchery Fall	4	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin: Lower River Hatchery Spring	2	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin: Mid- River Bright Hatchery Fall	4	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin: North Lewis River Fall	4	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin: Snake River Fall	4	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin: Snake River Spring/Summer	4	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin: Spring Creek Hatchery Fall	4	Operational Stock Assessment					
NWFSC / SWFSC	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin: Upper River Bright Fall	4	Operational Stock Assessment					

Planned Assessments for FSSI and Non-FSSI Stocks - FY 2019 Quarter 2 (January - March, 2019)									
Science		FSSI /		Model	Planned	,			
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class⁴	Asmt Type⁵	Notes			
					Operational				
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin:	4	Stock				
SWFSC	TTIVIC	14011 1 331	Upper River Spring		Assessment				
				Operational					
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin:	4	Stock				
SWFSC	TTIVIC	14011-1 331	Upper River Summer		Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Columbia River Basin:	4	Stock				
SWFSC	TTIVIC	FIVIC NOII-F331	Upper Willamette Spring	-	Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Northern California Coast:	2	Stock				
SWFSC	PFIVIC	11011-1331	California Coastal	2					
					Assessment Operational				
NWFSC /	PFMC	FSSI	Chinook salmon - Northern California Coast:	4	•				
SWFSC	PFIVIC	F33I	Klamath River Fall	4	Stock				
					Assessment				
NWFSC /	DENAC	Non ECCI	On-FSSI Chinook salmon - Oregon Coast: Central and Northern Oregon		Operational				
SWFSC	PFMC	Non-FSSI		4	Stock				
					Assessment				
NWFSC /	25140	C Non-FSSI	Chinook sa	Chinook salmon - Oregon Coast: Southern	_	Operational			
SWFSC	PFMC		Oregon	4	Stock				
			Ü		Assessment				
NWFSC /			Chinook salmon - Puget Sound: Cedar River		Operational				
SWFSC	PFMC	Non-FSSI	Summer/Fall	4	Stock				
					Assessment				
NWFSC /		PFMC Non-FSSI	Chinook salmon - Puget Sound: Eastern Strait of Juan de Fuca Summer/Fall	_	Operational				
SWFSC	PFMC			4	Stock				
			,		Assessment				
NWFSC /			Chinook salmon - Puget Sound: Green River		Operational				
SWFSC	PFMC	Non-FSSI	Summer/Fall	4	Stock				
					Assessment				
NWFSC /			Chinook salmon - Puget Sound: Mid Hood		Operational				
SWFSC	PFMC	Non-FSSI	Canal Summer/Fall	4	Stock				
					Assessment				
NWFSC /			Chinook salmon - Puget Sound: Nisqually		Operational				
SWFSC	PFMC	Non-FSSI	River Summer/Fall	4	Stock				
					Assessment				
NWFSC /			Chinook salmon - Puget Sound: Nooksack		Operational				
SWFSC	PFMC	Non-FSSI	Spring Early	4	Stock				
			5p6 = 37		Assessment				
NWFSC /			Chinook salmon - Puget Sound: Puyallup		Operational				
SWFSC	PFMC	Non-FSSI	Summer/Fall	4	Stock				
			30		Assessment				
NWFSC /			Chinook salmon - Puget Sound: Skagit		Operational				
SWFSC	PFMC	Non-FSSI	Spring	4	Stock				
311130			Skiii B		Assessment				
NWFSC /			Chinook salmon - Puget Sound: Skagit		Operational				
SWFSC	PFMC	Non-FSSI	Summer/Fall	4	Stock				
SWF3C			Summer, Full		Assessment				

Planned A	Assessment	s for FSSI a	and Non-FSSI Stocks - FY 2019 Quarter 2	(January	- March, 201	.9)		
Science		FSSI /		Model	Planned			
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type ⁵	Notes		
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Puget Sound: Skokomish	2	Stock			
SWFSC			Summer/Fall	_	Assessment			
					Operational			
NWFSC /	PFMC	PFMC Non-FSSI	Chinook salmon - Puget Sound: Snohomish	4	Stock			
SWFSC			Summer/Fall		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Puget Sound:	4	Stock			
SWFSC		1011-1 331	Stillaguamish Summer/Fall		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Puget Sound: White River	3	Stock			
SWFSC			Spring		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast: Grays	4	Stock			
SWFSC			Harbor Fall		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	on-FSSI Chinook salmon - Washington Coast: Grays Harbor Spring	4	Stock			
SWFSC	111116	110111331			Assessment			
							Operational	
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast: Hoh	4	Stock			
SWFSC	111116	110111001	Fall		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast: Hoh	4	Stock			
SWFSC	111116		Spring/Summer		Assessment			
			Chinook salmon - Washington Coast: Hoko		Operational			
NWFSC /	PFMC	Non-FSSI		4	Stock			
SWFSC			Summer/Fall		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast: Queets	4	Stock			
SWFSC			Fall		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast: Queets	4	Stock			
SWFSC			Spring/Summer		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast:	4	Stock			
SWFSC			Quillayute Fall		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast:	4	Stock			
SWFSC			Quillayute Spring/Summer		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast:	2	Stock			
SWFSC			Quinault Fall Hatchery		Assessment			
AUA/500 /					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast:	4	Stock			
SWFSC	I I IVIC	I IVIC INUII-F331	Willapa Bay Fall Hatchery		Assessment			
					Operational			
NWFSC /	PFMC	Non-FSSI	Chinook salmon - Washington Coast:	4	Stock			
SWFSC			Willapa Bay Fall Natural	'	Assessment			
			1		300			

Planned A	Planned Assessments for FSSI and Non-FSSI Stocks - FY 2019 Quarter 2 (January - March, 2019)								
Science		FSSI /		Model	Planned				
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type⁵	Notes			
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Oregon Production Index	2	Stock				
SWFSC			Area: Central California Coast	_	Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Oregon Production Index	4	Stock				
SWFSC			Area: Columbia River Early Hatchery		Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Oregon Production Index	4	Stock				
SWFSC			Area: Columbia River Late Hatchery		Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Oregon Production Index	2	Stock				
SWFSC			Area: Lower Columbia Natural	_	Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Oregon Production Index	4	Stock				
SWFSC			Area: Oregon Coast Hatchery		Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Oregon Production Index	4	Stock				
SWFSC	111110	110111001	Area: Oregon Coast Natural		Assessment				
			Coho salmon - Oregon Production Index		Operational				
NWFSC /	PFMC	Non-FSSI	Area: Southern Oregon/Northern California	2	Stock				
SWFSC	111110		Coast	_	Assessment				
			Coust		Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Puget Sound: Hood Canal	4	Stock				
SWFSC	111110		cono samiento a aget sounar ricou canar		Assessment				
					Operational				
NWFSC /	PFMC	PFMC Non-FSSI	Coho salmon - Puget Sound: Skagit	3	Stock				
SWFSC	111110	110111001	cono samon i ager sounar shagir		Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Puget Sound: Snohomish	3	Stock				
SWFSC					Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Puget Sound: South Puget	3	Stock				
SWFSC			Sound Hatchery		Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Puget Sound: Stillaguamish	4	Stock				
SWFSC					Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast: Grays	3	Stock				
SWFSC			Harbor		Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast: Hoh	3	Stock				
SWFSC					Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast: Queets	3	Stock				
SWFSC			<u> </u>		Assessment				
					Operational				
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast:	3	Stock				
SWFSC			Quillayute Fall		Assessment				
l			1						

Planned Assessments for FSSI and Non-FSSI Stocks - FY 2019 Quarter 2 (January - March, 2019)							
Science		FSSI /		Model	Planned		
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type⁵	Notes	
					Operational		
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast:	3	Stock		
SWFSC			Quillayute Summer Hatchery		Assessment		
					Operational		
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast: Quinault	2	Stock		
SWFSC	111110	11011 1 331	Hatchery	_	Assessment		
					Operational		
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast: Strait of	3	Stock		
SWFSC			Juan de Fuca		Assessment		
					Operational		
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast: Willapa	3	Stock		
SWFSC	111110	11011 1 331	Bay Hatchery		Assessment		
					Operational		
NWFSC /	PFMC	Non-FSSI	Coho salmon - Washington Coast: Willapa	3	Stock		
SWFSC	111110	11011 1 331	Bay Natural		Assessment		
					Operational		
NWFSC /	PFMC	Non-FSSI	Pacific hake - Pacific Coast	6	Stock		
SWFSC	111110	11011 1 331	r deme nake i deme eoust		Assessment		
					Operational		
NWFSC /	PFMC	Non-FSSI	Pink salmon - Puget Sound	4	Stock		
SWFSC	TTIVIC	14011 1 331	Till Sullion Tuget Sound	-	Assessment		
					Operational		
PIFSC	WPFMC	Non-FSSI	Spanner crab - Main Hawaiian Islands	3	Stock	Delayed from FY18	
11130	WITIVIC	14011 1 331	Spanner crab Want Hawanan Islands	3	Assessment	Delayed Holli 1110	
					Operational -		
SEFSC	CFMC	ESSI	FSSI Caribbean spiny lobster - Puerto Rico	2	Stock	Delayed to Q4	
32.30	Citie	1 331			Assessment	Delayed to Q1	
					Operational		
SEFSC	CFMC	FSSI	Caribbean spiny lobster - St. Croix	2	Stock-	Delayed to Q4	
52.50	G. 1.1.G		canadan spiny redster ou creix	_	Assessment	20.0,00.00 \	
					Operational-		
SEFSC	CFMC	FSSI	Caribbean spiny lobster St. Thomas / St.	2	Stock-	Delayed to Q4	
02.00			John	_	Assessment	200,0000	
					Operational		
SEFSC	GMFMC	FSSI	Brown shrimp - Gulf of Mexico	5	Stock		
					Assessment		
					Operational -		
SEFSC	GMFMC	FSSI	Gray Triggerfish - Gulf of Mexico	6	Stock-	Delayed to FY20	
			, 33		Assessment	,	
					Operational		
SEFSC	GMFMC	FSSI	Pink shrimp - Gulf of Mexico	5	Stock		
			•		Assessment		
					Operational		
SEFSC	GMFMC	FSSI	Red grouper - Gulf of Mexico	6	Stock-	Delayed to Q4	
			- •		Assessment		
			+		Operational-	_	
SEFSC	GMFMC	FSSI	Royal red shrimp Gulf of Mexico	2	Stock-	Assessment not	
		. 331			Assessment	conducted in FY19	

Planned A	Assessment	s for FSSI a	and Non-FSSI Stocks - FY 2019 Quarter 2	(January	- March, 201	9)	
Science		FSSI /		Model	Planned		
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type ⁵	Notes	
. ,					Operational		
SEFSC	GMFMC	IMFMC FSSI	White shrimp - Gulf of Mexico	5	Stock		
JEI JC	GIVII IVIC	1 331	Write Silling Guil of Mexico	,	Assessment		
					Operational		
SEFSC	SAFMC	FSSI	Brown rock shrimp - Southern Atlantic	2	Stock-	Assessment not	
JEI JC	SATIVIC	1331	Coast	=		conducted in FY19	
					Assessment Operational		
SEFSC	SAFMC	FSSI	Prouga chrima Couthara Atlantic Coast	2	Stock-	Assessment not	
SEFSC	SAFIVIC	1001	Brown shrimp - Southern Atlantic Coast	ź		conducted in FY19	
					Assessment		
65566	645346	F001			Operational	Assessment not	
SEFSC	SAFMC	FSSI	Pink shrimp - Southern Atlantic Coast	2	Stock	conducted in FY19	
					Assessment		
					Operational		
SEFSC	SAFMC	FSSI	Red porgy - Southern Atlantic Coast	6	Stock	Delayed to FY20	
					Assessment		
					Operational-	Assessment not	
SEFSC	SAFMC	FSSI	White shrimp - Southern Atlantic Coast	2	Stock	conducted in FY19	
					Assessment	conducted in 1 115	
Planned A	Assessment	s for FSSI a	and Non-FSSI Stocks - FY 2019 Quarter 3	(April - J	une, 2019)		
Science		FSSI /		Model	Planned		
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type ⁵	Notes	
					Operational		
AFSC	NPFMC	FSSI	Blue king crab - Pribilof Islands	2	Stock		
7 11 3 0		1 331	Bide king class Tribilet Islands	_	Assessment		
					Operational		
AFSC	NPFMC	NPFMC FSSI	Golden king crab - Eastern Aleutian Islands	5	Stock	Not on initial Schedule	
Aisc	idi i ivic				Assessment		
					Operational		
AFSC	NPFMC	FSSI	Golden king crab - Western Aleutian	5	Stock	Not on initial	
AFSC	INPFIVIC	PFIVIC F551	Islands	3		Schedule	
					Assessment		
A F.C.C	NIDENAC	N FCCI	NA/anthamana anallan Alanka	2	Operational		
AFSC	NPFMC	Non-FSSI	Weathervane scallop - Alaska	2	Stock		
					Assessment		
NWFSC /					Operational		
SWFSC	PFMC	FSSI	Cabezon Southern Pacific Coast	6	Stock	Delayed to Q4	
					Assessment		
NWFSC /					Operational		
SWFSC	PFMC	FSSI	Petrale sole - Pacific Coast	6	Stock	Delayed to Q4	
311130					Assessment		
NWFSC /					Operational		
SWFSC	PFMC	FSSI	Widow rockfish - Pacific Coast	6	Stock-	Delayed to Q4	
300130					Assessment		
			Greater Amberjack - Southern Atlantic		Operational		
SEFSC	SAFMC	FSSI	_	6	Stock-	Delayed to FY20	
			Coast		Assessment		
					Operational		
PIFSC	WPFMC	FSSI	American Samoa Bottomfish Multi-species	3	Stock-	Delayed to Q4	
	WI FIVE	TOOL	Complex		Assessment	Delayed to Q4	

Planned A	Planned Assessments for FSSI and Non-FSSI Stocks - FY 2019 Quarter 3 (April - June, 2019)								
Science		FSSI /		Model	Planned				
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type ⁵	Notes			
(1)					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Big-eye bream - Guam	1	Stock	Mult-species			
FIFSC	VVPFIVIC	14011-F331	big-eye bream - Guam	1		Complex			
					Assessment	-			
DIECO					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Blacktail snapper - Guam	1	Stock	Mult-species			
					Assessment	Complex			
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Bluefin trevally - Guam	1	Stock	Mult-species			
					Assessment	Complex			
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Bluespine unicornfish - Guam	1	Stock	Mult-species			
					Assessment	Complex			
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Filament-finned parrotfish - Guam	1	Stock	Mult-species			
					Assessment	Complex			
					Operational				
PIFSC	WPFMC	FSSI	Guam Bottomfish Multi-species Complex	3	Stock-	Delayed to Q4			
			·		Assessment				
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Humpback snapper - Guam	1	Stock	Mult-species			
			Tampasan snapper Saam	_	Assessment	Complex			
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Island jack - Guam	1	Stock	Mult-species			
FIFSC	WFFIVIC	14011-1331	Island Jack - Guain	•	Assessment	Complex			
					Operational	•			
PIFSC	WPFMC	Non FCCI	Langface ammayor. Cuam	4	Stock	Guam Ecosystem			
PIFSC	WPFIVIC	Non-FSSI	Longface emperor - Guam	1		Mult-species Complex			
					Assessment	Complex			
			Northern Mariana Islands Bottomfish Multi		Operational				
PIFSC	WPFMC	FSSI	species Complex	3	Stock	Delayed to Q4			
					Assessment				
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Pacific longnose parrotfish - Guam	1	Stock	Mult-species			
					Assessment	Complex			
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Redlip parrotfish - Guam	1	Stock	Mult-species			
					Assessment	Complex			
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Steephead parrotfish - Guam	1	Stock	Mult-species			
					Assessment	Complex			
					Operational	Guam Ecosystem			
PIFSC	WPFMC	Non-FSSI	Yellowlip emperor - Guam	1	Stock	Mult-species			
					Assessment	Complex			
					Operational				
SWFSC	PFMC	FSSI	Pacific chub mackerel - Pacific	6	Stock				
					Assessment				
					Operational				
SWFSC	PFMC	FSSI	Pacific sardine - Pacific	6	Stock				
		. 55.	r dome sarame r dome	Ĭ	Assessment				
<u></u>					אוושוווננטנית				

Planned A	Assessment	s for FSSI a	and Non-FSSI Stocks - FY 2019 Quarter 4	(July - Se	ptember, 201	L9)
Science		FSSI /		Model	Planned	
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type ⁵	Notes
					Operational	
AFSC	NPFMC	Non-FSSI	Chinook salmon - Eastern North Pacific Far	6	Stock	
Alsc	INFIIVIC	11011-1 331	North Migrating		Assessment	
					Operational	
AFSC	NPFMC	MC Non-FSSI	Coho salmon - Auke Creek	6	Stock	
AF3C	INFFINIC	11011-1331	Cono Sannon - Auke Creek	U	Assessment	
					Operational	
AFSC	NPFMC	Non-FSSI	n-FSSI Coho salmon - Berners River	6	Stock	
Alsc	INFIIVIC	WITIVIC TOOM 1331	Cono sannon - Berners River	U	Assessment	
					Operational	
AFSC	NPFMC	Non-FSSI	Coho salmon Hugh Smith Lako	6	Stock	
AFSC	INPFIVIC	11011-5331	Coho salmon - Hugh Smith Lake	O		
					Assessment Operational	
NEFSC	NANENAC	ECCI	Plack see bass Mid Atlantic Coast	6		
NEFSC	MAFMC	FSSI	Black sea bass - Mid-Atlantic Coast	О	Stock	
					Assessment	
NEECC	N 4 A E N 4 C	ECC!	Diversials Atlantic Coast		Operational	
NEFSC	MAFMC	FSSI	Bluefish - Atlantic Coast	6	Stock	
					Assessment	
NEECC	N 4 A EN 4 C	ECCI	Carra Atlantia Carat		Operational	
NEFSC	MAFMC	FSSI	Scup - Atlantic Coast	6	Stock	
					Assessment	
				_	Operational	Does not count
NEFSC	NEFMC	FSSI	Atlantic cod - Eastern Georges Bank	4	Stock	towards adequacy
					Assessment	
NEECC	NEENAG				Operational	Initially listed as an
NEFSC	NEFMC	Non-FSSI	Atlantic salmon - Gulf of Maine	2	Stock	FSSI stock in error
					Assessment	
NIEECO	NETNAC	FCCI	Barndoor skate - Georges Bank / Southern		Operational	Not on initial
NEFSC	NEFMC	FSSI	New England	2	Stock	Schedule
					Assessment	
NEECC	NEENAC	FCCI	Clearnose skate - Georges Bank / Southern	2	Operational	Not on initial
NEFSC	NEFMC	FSSI	New England	2	Stock	Schedule
					Assessment	
NEECC	NEENAC	ECC!	Haddadi Fastawa Caawaaa Bawli	4	Operational	Does not count
NEFSC	NEFMC	FSSI	Haddock - Eastern Georges Bank	4	Stock	towards adequacy
					Assessment	
NEECC	NIFFNAC	FCCI	Little skate - Georges Bank / Southern New	2	Operational	Not on initial
NEFSC	NEFMC	FSSI	England	2	Stock	Schedule
					Assessment	
NEECC	NEENAC	FCCI	Rosette skate - Georges Bank / Southern	2	Operational	Not on initial
NEFSC	NEFMC	FSSI	New England	2	Stock	Schedule
					Assessment	
NETCC	NEENAC	ECCI	Smooth skate - Georges Bank / Southern	2	Operational	Not on initial
NEFSC	NEFMC	EFMC FSSI	New England	2	Stock	Schedule
					Assessment	
NEFSC	NEFMC	FSSI	Thorny skate - Georges Bank / Southern	2	Operational Stock	Not on initial
INEFSC	INCFIVIC	rool	New England	2		Schedule
					Assessment	

Planned Assessments for FSSI and Non-FSSI Stocks - FY 2019 Quarter 4 (July - September, 2019)								
Science	Science FSSI /				Planned			
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type ⁵	Notes		
NEFSC	NEFMC	FSSI	Winter skate - Georges Bank / Southern New England	2	Operational Stock Assessment	Not on initial Schedule		
NEFSC	NEFMC	FSSI	Yellowtail flounder - Georges Bank	2	Operational Stock Assessment			
NEFSC	NEFMC / MAFMC	FSSI	Goosefish - Gulf of Maine / Northern Georges Bank	2	Operational Stock Assessment	Not on initial Schedule		
NEFSC	NEFMC / MAFMC	FSSI	Goosefish - Southern Georges Bank / Mid- Atlantic	2	Operational Stock Assessment	Not on initial Schedule		
NWFSC / SWFSC	PFMC	Non-FSSI	Big Skate - Pacific Coast	6	Operational Stock Assessment			
NWFSC / SWFSC	PFMC	FSSI	Black rockfish - California	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Black rockfish - Oregon	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Black rockfish -Washington	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Blackgill rockfish - Southern California	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Blackspotted and Rougheye Rockfish Complex	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	California Blue and Deacon Rockfish Complex	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Cabezon - Northern California	6	Operational Stock Assessment	Delayed from Q3		
NWFSC / SWFSC	PFMC	FSSI	Cabezon - Southern Califnoria	6	Operational Stock Assessment	Delayed from Q3		
NWFSC / SWFSC	PFMC	Non-FSSI	Cabezon - Oregon	6	Operational Stock Assessment	Not on initial Schedule		
NWFSC / SWFSC	PFMC	Non-FSSI	Cabezon - Washington	1	Operational Stock Assessment	Not on initial Schedule		
NWFSC / SWFSC	PFMC	Non-FSSI	China rockfish - Central Paicifc Coast	6	Stock Monitoring Analysis	Not on initial Schedule		

Planned Assessments for FSSI and Non-FSSI Stocks - FY 2019 Quarter 4 (July - September, 2019)								
Science		FSSI /		Model	Planned			
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Class ⁴	Asmt Type⁵	Notes		
NWFSC / SWFSC	PFMC	Non-FSSI	China rockfish - Northern Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	Non-FSSI	China rockfish - Southern Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Cowcod - Southern California	3	Operational Stock Assessment			
NWFSC / SWFSC	PFMC	FSSI	Darkblotched rockfish - Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Dover sole - Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Gopher rockfish - Northern California	6	Operational Stock Assessment	Combined with Black and yellow rockfish data and assessed as a complex		
NWFSC / SWFSC	PFMC	FSSI	Lingcod - Northern Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Lingcod - Southern Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Longnose skate - Pacific Coast	6	Operational Stock Assessment	Initially listed as non- FSSI in error		
NWFSC / SWFSC	PFMC	FSSI	Longspine thornyhead - Pacific Coast	6	Stock Monitoring Analysis	Not on initial Schedule		
NWFSC / SWFSC	PFMC	FSSI	Petrale sole - Pacific Coast	6	Operational Stock Assessment	Delayed from Q3		
NWFSC / SWFSC	PFMC	FSSI	Sablefish - Pacific Coast	6	Operational Stock Assessment			
NWFSC / SWFSC	PFMC	FSSI	Widow rockfish - Pacific Coast	6	Operational Stock Assessment	Delayed from Q3		
PIFSC	WPFMC	FSSI	American Samoa Bottomfish Multi-species Complex	3	Operational Stock Assessment	Delayed from Q3		
PIFSC	WPFMC	WPFMC FSSI Guam Bottomfish Multi-species Complex		3	Operational Stock Assessment	Delayed from Q3		

Planned Assessments for FSSI and Non-FSSI Stocks - FY 2019 Quarter 4 (July - September, 2019)							
Science		FSSI /		Model	Planned		
Center(s) ¹	Jurisdiction ²	Non-FSSI ³	Stock	Asmt Type⁵	Notes		
PIFSC	WPFMC	FSSI	Northern Mariana Islands Bottomfish Multi- species Complex	l 3 Sto		Delayed from Q3	
PIFSC	WPFMC	Non-FSSI	Oceanic whitetip shark - Western and Central Pacific	6	Operational Stock Assessment		
PIFSC	WPFMC	Non-FSSI	Skipjack tuna - Western and Central Pacific	6	Operational Stock Assessment		
PIFSC	WPFMC	Non-FSSI	Striped marlin - Western and Central Pacific	6	Operational Stock Assessment		
SEFSC	HMS	Non-FSSI	Skipjack tuna Western Atlantic	6	Operational Stock Assessment	Assessment was not conducted	
SEFSC	HMS	Non-FSSI	White marlin - Atlantic	6	Operational Stock Assessment	Delayed to FY 20	
SEFSC	HMS	Non-FSSI	Yellowfin tuna Western Atlantic	6	Operational Stock Assessment	Delayed to FY 20	
SEFSC	CFMC	FSSI	Caribbean spiny lobster Puerto Rico	2	Operational Stock Assessment	Delayed to FY20	
SEFSC	CFMC	FSSI	Caribbean spiny lobster - St. Croix	2	Operational Stock Assessment	Delayed to FY20	
SEFSC	CFMC	FSSI	Caribbean spiny lobster St. Thomas / St. John	2	Operational Stock Assessment	Delayed to FY20	
SEFSC	GMFMC	FSSI	Red grouper Gulf of Mexico	6	Operational Stock Assessment	Delayed to FY20	

Footnotes

- 1 NOAA Fisheries Science Centers include Alaska Fisheries Science Center (AFSC), Northeast Fisheries Science Center (NEFSC), Northwest Fisheries Science Center (NWFSC), Pacific Islands Fisheries Science Center (PIFSC), Southeast Fisheries Science Center (SEFSC) and Southwest Fisheries Science Center (SWFSC). In some cases, assessments are conducted by multiple science centers (e.g. NW/SW and SW/PI).
- 2 Jurisdictions include Caribbean Fishery Management Council (CFMC), Gulf of Mexico Fishery Management Council (GMFMC), Atlantic Highly Migratory Species Division (HMS), Mid-Atlantic Fishery Management Council (MAFMC), New England Fishery Management Council (NEFMC), North Pacific Fishery Management Council (NPFMC), Pacific Fishery Management Council (PFMC), South Atlantic Fishery Management Council (SAFMC) and Western Pacific Fishery Management Council (WPFMC).
- 3 FSSI refers to federally managed stocks and stock complexes included on the Fish Stock Sustainability Index. Non-FSSI refers to federally managed stocks and stock complexes not included on the Fish Stock Sustainability Index. INT refers to international stocks.
- 4 Assessment Model Category: Category of stock assessment model accepted for use in management, as described in the 2018 Next Generation Stock Assessment Improvement Plan document.
- 1 = Data-Limited (e.g. DBSRA, DCAC, Surplus Production MSY, Egg-Escapement, Mean Length Estimation)
- 2 = Index-Based (e.g. AIM, basic linear models and time series analyses)
- 3 = Aggregate Biomass Dynamics (e.g. Schaefer or Pella-Tomlinson Production Models, ASPIC, delay-difference models)
- 4 = Virtual Population Analysis (e.g. ADAPT, VPA-2BOX)
- 5 = Statistical Catch-at-Length (e.g. SCALE, SS, MultifanCL)
- 6 = Statistical Catch-at-Age (e.g. SS, ASAP, AMAK, BAM, MultifanCL, CASAL)
- 5 For FY19, the National Stock Assessment Program is adapting how it tracks and classifies its activities related to the provision of harvest recommendations. The changes reflect the guidance established in the 2018 Next Generation Stock Assessment Improvement Plan document. Operational Stock Assessment Activities labeled "Operational Stock Assessments" include analyses that utilize one or more of the categories of stock assessment models described in the "Model Class" field (Footnote 4). Within the range of Operational Stock Assessments will be first time applications of previously researched methods ("new" or "benchmark" assessments); applications with updated data streams and minor revisions to methods within the scope of previously researched themes; and applications that simply update the model with the most recent data.

Stock Monitoring Analysis - Activities labeled "Stock Monitoring Analyses" generally include activities that provide stock-level advice to fishery managers between stock assessments. These analyses include the methods described in the "Model Class" field (Footnote 4), but only when they are updated using the most recent catch information to develop new catch advice. These are sometimes called partial updates. Because there are no changes in the methods or data series in stock monitoring updates, just updated catch data, the conduct and review of these analyses does not warrant intense scrutiny.

Changes in the assessment schedule are indicated by red font.

Appendix D. Assessment status for FSSI stocks and stock complexes at the end of FY2019. Changes in assessment information relative to the previous fish assessment quarterly report are highlighted with red text. For more information, please see Stock SMART - https://www.st.nmfs.noaa.gov/StockSMART.

					st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
AFSC	NPFMC	Alaska plaice - Bering Sea / Aleutian Islands	2019	6	Stock Monitoring Update	Yes	
AFSC	NPFMC	Arrowtooth flounder - Bering Sea / Aleutian Islands	2019	6	Operational Stock Assessment	Yes	
AFSC	NPFMC	Arrowtooth flounder - Gulf of Alaska	2019	6	Stock Monitoring Update	Yes	
AFSC	NPFMC	Atka mackerel - Bering Sea / Aleutian Islands	2019	6	Operational Stock Assessment	Yes	
AFSC	NPFMC	Bering Sea / Aleutian Islands Blackspotted and Rougheye Rockfish Complex	2019	6	Operational Stock Assessment	Yes	
AFSC	NPFMC	Bering Sea / Aleutian Islands Flathead Sole Complex	2019	6	Operational Stock Assessment	Yes	The assessment is for the Flathead Sole Complex indicator stock, Flathead sole.
AFSC	NPFMC	Bering Sea / Aleutian Islands Rock Sole Complex	2019	6	Operational Stock Assessment	Yes	The assessment listed is for the Rock Sole Complex indicator stock, Northern rock sole.
AFSC	NPFMC	Bering Sea / Aleutian Islands Skate Complex	2019	6	Operational Stock Assessment	Yes	The assessment is for the Bering Sea / Aleutian Islands Skate Complex indicator stock, Alaska skate.
AFSC	NPFMC	Blue king crab - Pribilof Islands	2019	2	Operational Stock Assessment	No	
AFSC	NPFMC	Blue king crab - Saint Matthew Island	2019	5	Operational Stock Assessment	Yes	
AFSC	NPFMC	Dusky rockfish - Gulf of Alaska	2019	6	Operational Stock Assessment	Yes	
AFSC	NPFMC	Flathead sole - Gulf of Alaska	2019	6	Stock Monitoring Update	Yes	
AFSC	NPFMC	Golden king crab - Aleutian Islands	2019	5	Operational Stock Assessment	Yes	
AFSC	NPFMC	Greenland halibut - Bering Sea / Aleutian Islands	2019	6	Operational Stock Assessment	Yes	

				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Туре	Adequate?	Assessment Notes
AFSC	NPFMC	Gulf of Alaska Blackspotted and Rougheye Rockfish Complex	2019	6	Stock Monitoring Update	Yes	
AFSC	NPFMC	Gulf of Alaska Deepwater Flatfish Complex	2019	6	Stock Monitoring Update	Yes	The assessment is for Deepwater Flatfish Complex indicator stock, Dover sole.
AFSC	NPFMC	Gulf of Alaska Demersal Shelf Rockfish Complex	2019	3	Operational Stock Assessment	Yes	The assessment is for Demersal Shelf Rockfish Complex indicator stock, yelloweye rockfish.
AFSC	NPFMC	Gulf of Alaska Shallow Water Flatfish Complex	2019	6	Stock Monitoring Update	Yes	The assessment is for Gulf of Alaska Shallow Water Flatfish Complex indicator stocks, rock sole and Northern rock sole.
AFSC	NPFMC	Gulf of Alaska Thornyhead Rockfish Complex	2019	3	Operational Stock Assessment	Yes	The assessment is for the Thornyhead Rockfish Complex indicator stock, shortspine thornyhead.
AFSC	NPFMC	Northern rockfish - Bering Sea / Aleutian Islands	2019	6	Stock Monitoring Update	Yes	
AFSC	NPFMC	Northern rockfish - Western / Central Gulf of Alaska	2019	6	Operational Stock Assessment	Yes	
AFSC	NPFMC	Pacific cod - Bering Sea / Aleutian Islands	2019	6	Operational Stock Assessment	Yes	
AFSC	NPFMC	Pacific cod - Gulf of Alaska	2019	6	Operational Stock Assessment	Yes	
AFSC	NPFMC	Pacific ocean perch - Bering Sea / Aleutian Islands	2019	6	Operational Stock Assessment	Yes	
AFSC	NPFMC	Pacific ocean perch - Gulf of Alaska	2019	6	Stock Monitoring Update	Yes	
AFSC	NPFMC	Red king crab - Bristol Bay	2019	5	Operational Stock Assessment	Yes	
AFSC	NPFMC	Red king crab - Norton Sound	2019	5	Operational Stock Assessment	Yes	
AFSC	NPFMC	Red king crab - Pribilof Islands	2018	2	Operational Stock Assessment	No	
AFSC	NPFMC	Rex sole - Gulf of Alaska	2019	6	Stock Monitoring Update	Yes	
AFSC	NPFMC	Sablefish - Eastern Bering Sea / Aleutian Islands / Gulf of Alaska	2019	6	Operational Stock Assessment	Yes	

				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
					Operational		
AFSC	NPFMC	Snow crab - Bering Sea	2019	5	Stock	Yes	
					Assessment		
		Southern Tanner crab -			Operational		
AFSC	NPFMC	Bering Sea	2019	5	Stock	Yes	
		Defining Sea			Assessment		
		Walleye pollock - Aleutian			Operational		
AFSC	NPFMC	Islands	2019	6	Stock	Yes	
		isiarius			Assessment		
		Walleye pollock - Eastern			Operational		
AFSC	NPFMC	Bering Sea	2019	6	Stock	Yes	
		Defing Sea			Assessment		
		Walleye pollock - Western			Operational		
AFSC	NPFMC	/ Central / West Yakutat	2019	6	Stock	Yes	
AFSC	INFFIVIC	Gulf of Alaska	2019	U	Assessment	163	
		Guil Of AldSkd			Assessment		
		Yellowfin sole - Bering Sea			Operational		
AFSC	NPFMC	-	2019	6	Stock	Yes	
		/ Aleutian Islands			Assessment		
		Atlantia mandanal Colf of			Operational		
NEFSC	MAFMC	Atlantic mackerel - Gulf of	2018	6	Stock	Yes	
		Maine / Cape Hatteras			Assessment		
					Operational		
NEFSC	MAFMC	Atlantic surfclam - Mid-	2019	6	Stock	Yes	
		Atlantic Coast			Assessment		
					Operational		
NEFSC	MAFMC	Black sea bass - Mid-	2019	6	Stock	Yes	
		Atlantic Coast			Assessment		
					Operational		
NEFSC	MAFMC	Bluefish - Atlantic Coast	2019	6	Stock	Yes	
					Assessment		
					Operational		
NEFSC	MAFMC	Butterfish - Gulf of Maine	2017	6	Stock	Yes	
		/ Cape Hatteras	2027	Ů	Assessment		
		Longfin inshore squid -			Operational	†	
NEFSC	MAFMC	Georges Bank / Cape	2017	2	Stock	No	
112130	1017 11 1010	Hatteras	2017	_	Assessment		
		Northern shortfin squid -			Operational		
NEFSC	MAFMC	Northwestern Atlantic	2005	2	Stock	No	
112130	17.7.41110	Coast	2005	_	Assessment		
					Operational		
NEFSC	MAFMC	Ocean quahog - Atlantic	2017	6	Stock	Yes	
IVEISC	IVI) II IVIC	Coast	2017	J	Assessment		
					Stock		
NEFSC	MAFMC	Scup - Atlantic Coast	2019	6	Monitoring	Yes	
INLIG	IVIALIVIC	Jeap Additic Coast	2013	3	Update	163	
					Operational		
NEFSC	MAFMC	Summer flounder - Mid-	2019	6	Stock	Yes	
NLF3C	IVIALIVIC	Atlantic Coast	2019	U	Assessment	163	
NEECC	NAVENAC	Tilefish - Mid-Atlantic	2017	6	Operational	Voc	
NEFSC	MAFMC	Coast	2017	6	Stock	Yes	
					Assessment		

				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
					Operational		
NEFSC	NEFMC	Acadian redfish - Gulf of	2018	6	Stock	Yes	
		Maine / Georges Bank			Assessment		
					Operational		
NEFSC	NEFMC	American plaice - Gulf of	2018	4	Stock	Yes	
		Maine / Georges Bank			Assessment		
					Operational	†	
NEFSC	NEFMC	Atlantic cod - Georges	2018	2	Stock	No	
		Bank		_	Assessment		
					Operational	†	
NEFSC	NEFMC	Atlantic cod - Gulf of	2018	6	Stock	Yes	
		Maine	2010		Assessment		
		Atlantic halibut -			Operational		
NEFSC	NEFMC	Northwestern Atlantic	2018	1	Stock	No	
IVELISE	IVELLIVIC	Coast	2010	_	Assessment	140	
		Atlantic herring -			Operational	†	
NEFSC	NEFMC	Northwestern Atlantic	2018	6	Stock	Yes	
INLFSC	INLFIVIC	Coast	2016	U	Assessment	163	
		Coast				 	
NEFSC	NIETNAC	Atlantic wolffish - Gulf of	2018	5	Operational Stock	Vos	
INEF3C	NEFMC	Maine / Georges Bank	2018	5		Yes	
		Dawadaay akata Caayaaa			Assessment	1	
NEECC	NIEENAG	Barndoor skate - Georges	2040	2	Operational		
NEFSC	NEFMC	Bank / Southern New	2019	2	Stock	No	
		England			Assessment	 	
NEECC	NIEEN 40	Clearnose skate -	2040	2	Operational	l l	
NEFSC	NEFMC	Southern New England /	2019	2	Stock	No	
		Mid-Atlantic			Assessment	ļ	
				_	Operational		
NEFSC	NEFMC	Haddock - Georges Bank	2018	4	Stock	Yes	
					Assessment	.	
	_				Operational		
NEFSC	NEFMC	Haddock - Gulf of Maine	2018	6	Stock	Yes	
					Assessment		
		Little skate - Georges			Operational		
NEFSC	NEFMC	Bank / Southern New	2019	2	Stock	No	
		England			Assessment		
		Ocean pout -			Operational		
NEFSC	NEFMC	Northwestern Atlantic	2018	2	Stock	No	
		Coast			Assessment		
		Offshore hake -			Operational		
NEFSC	NEFMC	Northwestern Atlantic	2011	-2	Stock	No	
		Coast			Assessment		
		Pollock - Gulf of Maine /			Operational	[T	
NEFSC	NEFMC	Georges Bank	2018	6	Stock	Yes	
		Georges Balik			Assessment		
		Red deepsea crab -			Operational		
NEFSC	NEFMC	· ·	2006	2	Stock	No	
		Northwestern Atlantic			Assessment		
		Dod bake Culf of Maire /			Operational		
NEFSC	NEFMC	Red hake - Gulf of Maine /	2018	2	Stock	No	
		Northern Georges Bank			Assessment		

					st Assessment		
Science	2		Fiscal	Model			
Center(s) ¹	Jurisdiction ²		Year	Class ³	Туре	Adequate?	Assessment Notes
		Red hake - Southern			Operational		
NEFSC	NEFMC	Georges Bank / Mid-	2018	2	Stock	No	
		Atlantic			Assessment		
		Rosette skate - Southern			Operational		
NEFSC	NEFMC	New England / Mid-	2019	2	Stock	No	
		Atlantic			Assessment		
		Sea scallop -			Operational		
NEFSC	NEFMC	Northwestern Atlantic	2018	6	Stock	Yes	
		Coast			Assessment		
		Silver hake - Gulf of Maine			Operational		
NEFSC	NEFMC		2018	2	Stock	No	
		/ Northern Georges Bank			Assessment		
		Silver hake - Southern			Operational		
NEFSC	NEFMC	Georges Bank / Mid-	2018	2	Stock	No	
		Atlantic			Assessment		
					Operational		
NEFSC	NEFMC	Smooth skate - Gulf of	2019	2	Stock	No	
	_	Maine			Assessment		
					Operational	1	
NEFSC	NEFMC	Thorny skate - Gulf of	2019	2	Stock	No l	
IVEISC	TTETTVIC	Maine	2013	_	Assessment	10	
					Operational	 	
NEFSC	NEFMC	White hake - Gulf of	2018	6	Stock	Yes	
NEFSC	INEFIVIC	Maine / Georges Bank	2016	0		162	
					Assessment	-	
NEECC	NEENAG	Windowpane - Gulf of	2040	2	Operational	l l	
NEFSC	NEFMC	Maine / Georges Bank	2018	2	Stock	No	
					Assessment		
		Windowpane - Southern			Operational		
NEFSC	NEFMC	New England / Mid-	2018	2	Stock	No	
		Atlantic			Assessment		
		Winter flounder - Georges			Operational		
NEFSC	NEFMC	Bank	2018	4	Stock	Yes	
		Dank			Assessment		
		Winter flounder - Gulf of			Operational		
NEFSC	NEFMC	Maine	2018	2	Stock	No	
		iviairie			Assessment		
		Winter flounder -			Operational		
NEFSC	NEFMC	Southern New England /	2018	6	Stock	Yes	
		Mid-Atlantic			Assessment		
		Winter skate - Georges			Operational		
NEFSC	NEFMC	Bank / Southern New	2019	2	Stock	No	
		England			Assessment		
		Witch flounder -			Operational		
NEFSC	NEFMC	Northwestern Atlantic	2018	2	Stock	No	
		Coast		_	Assessment		
					Operational	 	
NEFSC	NEFMC	Yellowtail flounder - Cape	2018	4	Stock	Yes	
IVLI JC	IVELLIVIC	Cod / Gulf of Maine	2010	7	Assessment	'53	
						 	
NEECC	NEENAC	Yellowtail flounder -	2010	2	Operational		
NEFSC	NEFMC	Georges Bank	2018	2	Stock	No	
					Assessment		

				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
		Yellowtail flounder -			Operational		
NEFSC	NEFMC	Southern New England /	2018	6	Stock	Yes	
		Mid-Atlantic			Assessment		
	NEFMC/	Goosefish - Gulf of Maine			Operational		
NEFSC	MAFMC	/ Northern Georges Bank	2019	2	Stock	No	Assessment sunset at close of FY19
	1017 (1 1010				Assessment		
	NEFMC/	Goosefish - Southern			Operational		
NEFSC	MAFMC	Georges Bank / Mid-	2019	2	Stock	No	Assessment sunset at close of FY19
		Atlantic			Assessment		
	NEFMC/	Spiny dogfish - Atlantic			Operational		
NEFSC	MAFMC	Coast	2015	5	Stock	Yes	
					Assessment		
NWFSC/		Arrowtooth flounder -		_	Operational		
SWFSC	PFMC	Pacific Coast	2017	6	Stock	Yes	
					Assessment		
NWFSC/		Black rockfish - Northern		_	Stock		
SWFSC	PFMC	Pacific Coast	2019	6	Monitoring	Yes	Washington
					Analysis		
NWFSC/		Black rockfish - Southern		_	Stock		
SWFSC	PFMC	Pacific Coast	2019	6	Monitoring	Yes	California + Oreon stocks
					Analysis		
NWFSC/		Blackgill rockfish -		_	Stock		
SWFSC	PFMC	Southern California	2019	6	Monitoring	Yes	
					Analysis		
NWFSC/				_	Stock		Assessed as a complex with Deacon
SWFSC	PFMC	Blue rockfish - California	2019	6	Monitoring	Yes	rockfish
					Analysis		
NWFSC/	5-1.0	Bocaccio - Southern	221=		Operational	.,	
SWFSC	PFMC	Pacific Coast	2017	6	Stock	Yes	
					Assessment		
NWFSC/	55140	Brown rockfish - Pacific	2044	2	Operational		
SWFSC	PFMC	Coast	2014	3	Stock	No	Inadequate at the end of FY 19
					Assessment		
NWFSC/	55140	O I O III	2040		Operational	.,	
SWFSC	PFMC	Cabezon - California	2019	6	Stock	Yes	
					Assessment		
NWFSC/	PFMC	California scorpionfish -	2017	c	Operational	Vos	
SWFSC	Privic	Southern California	2017	6	Stock	Yes	
					Assessment		
NWFSC/	PFMC	Canary rockfish - Pacific	2017	6	Operational Stock	Yes	
SWFSC	Privic	Coast	2017	U	Assessment	163	
					Operational		
NWFSC/	PFMC	Chilipepper - Southern	2017	6	Stock	Yes	
SWFSC	1 1 IVIC	Pacific Coast	2017	J	Assessment	103	
					Operational		
NWFSC/	PFMC	Chinook salmon -	2019	3	Stock	Yes	
SWFSC		Sacramento River Fall	2013		Assessment	'3	
					Operational		
NWFSC/	PFMC	Chinook salmon - Klamath	2019	4	Stock	Yes	
SWFSC		River Fall	_010		Assessment		
	<u> </u>				, 1330331110110		

				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
NWFSC/		Cowcod - Southern			Operational		
SWFSC	PFMC	California	2019	3	Stock	Yes	
					Assessment		
NWFSC/		Darkblotched rockfish -		_	Stock		
SWFSC	PFMC	Pacific Coast	2019	6	Monitoring	Yes	
					Analysis		
NWFSC/	DEN4C	Davian and a Danific Count	2010		Stock	Vaa	
SWFSC	PFMC	Dover sole - Pacific Coast	2019	6	Monitoring	Yes	
					Analysis Operational		
NWFSC/	PFMC	English sole - Pacific Coast	2013	3	Stock	No	
SWFSC	FINC	Linguisti sole - Facilic Coast	2013	3	Assessment	140	
					Operational		
NWFSC/	PFMC	Gopher rockfish -	2019	6	Stock	Yes	
SWFSC	111110	Northern California	2013	Ü	Assessment	163	
					Operational		
NWFSC/	PFMC	Greenspotted rockfish -	2011	3	Stock	No	
SWFSC		Pacific Coast	-		Assessment		
					Operational		
NWFSC/	PFMC	Greenstriped rockfish -	2009	6	Stock	No	
SWFSC		Pacific Coast			Assessment		
NUA/ECC/					Operational		
NWFSC/	PFMC	Kelp greenling - Oregon	2015	6	Stock	Yes	
SWFSC					Assessment		
NWFSC/					Stock		
SWFSC/	PFMC	Lingcod - Pacific Coast	2019	6	Monitoring	Yes	
300730					Analysis		
NWFSC/		Longnose skate - Pacific			Operational		
SWFSC	PFMC	Coast	2019	6	Stock	Yes	
344130		Coust			Assessment		
NWFSC/		Longspine thornyhead -			Stock		
SWFSC	PFMC	Pacific Coast	2019	6	Monitoring	Yes	
					Analysis		
NWFSC/		Pacific ocean perch -		_	Operational		
SWFSC	PFMC	Pacific Coast	2018	6	Stock	Yes	
					Assessment		
NWFSC/	DEN4C	Pacific sanddab - Pacific	2012		Operational	N-	Partial acceptance status
SWFSC	PFMC	Coast	2013	6	Stock	No	determinations only
					Assessment Operational		
NWFSC/	PFMC	Petrale sole - Pacific Coast	2019	6	Stock	Yes	
SWFSC	FINC	retrate sole - racific coast	2013	U	Assessment	163	
					Operational		
NWFSC/	PFMC	Rex sole - Pacific Coast	2013	3	Stock	No	
SWFSC				_	Assessment		
		_ ,			Stock		
NWFSC/	PFMC	Rougheye rockfish -	2019	6	Monitoring	Yes	Assessed as a complex with
SWFSC		Pacific Coast			Analysis		Blackspotted rockfish
NIMESC/					Operational		
NWFSC/ SWFSC	PFMC	Sablefish - Pacific Coast	2019	6	Stock	Yes	
344L2C					Assessment		

				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
NI)A/FCC/		Charthally rackfish			Operational		
NWFSC/ SWFSC	PFMC	Shortbelly rockfish - Pacific Coast	2007	6	Stock	No	
SVVFSC		Pacific Coast			Assessment		
NWFSC/		Shortspine thornyhead -			Operational		
SWFSC/	PFMC	Pacific Coast	2013	6	Stock	No	
300130		Facilic Coast			Assessment		
NWFSC/		Spiny dogfish - Pacific			Operational		
SWFSC	PFMC	Coast	2011	6	Stock	No	
300130		coust			Assessment		
NWFSC/		Splitnose rockfish - Pacific			Operational		
SWFSC	PFMC	Coast	2009	6	Stock	No	
300130		coust			Assessment		
NWFSC/		Starry flounder - Pacific			Operational		Stock is assessed in Northern and
SWFSC	PFMC	Coast	2018	2	Stock	No	Southern components and treated
300130		Coast			Assessment		as a complex
NWFSC/		Vermilion rockfish -			Operational		
SWFSC	PFMC	California	2005	-4	Stock	No	
300130		Camornia			Assessment		
NWFSC/		Widow rockfish - Pacific			Operational		
SWFSC/	PFMC	Coast	2019	6	Stock	Yes	
300130		Coast			Assessment		
NWFSC/		Yelloweye rockfish -			Operational		
SWFSC/	PFMC	Pacific Coast	2017	6	Stock	Yes	
30073C		Pacific Coast			Assessment		
NWFSC/		Yellowtail rockfish -			Operational		
SWFSC/	PFMC	Northern Pacific Coast	2017	6	Stock	Yes	
30073C		Northern Pacific Coast			Assessment		
		American Samoa			Operational		
PIFSC	WPFMC	Bottomfish Multi-species	2019	3	Stock	Yes	
		Complex			Assessment		
		Guam Bottomfish Multi-			Operational		
PIFSC	WPFMC	species Complex	2019	3	Stock	Yes	
		species complex			Assessment		
		Main Hawaiian Islands			Operational		Two assessments, one for the
PIFSC	WPFMC	Deep Bottomfish Multi-	2018	3	Stock	Yes	complex and another for the
		species Complex			Assessment		Opakapaka stock
							- p
DIECC	VA/DEN 4C	Northern Mariana Islands	2010	,	Operational	V	
PIFSC	WPFMC	Bottomfish Multi-species	2019	3	Stock	Yes	
		Complex			Assessment		
CEECO	CENAC	Caribboan Crawara	2015	2	Operational	No	Assessment of complex component
SEFSC	CFMC	Caribbean Groupers	2015	2	Stock Assessment	No	red hind
		Cauthhaan Banattah			Assessment		
SEFSC	CFMC	Caribbean Parrotfish Complex	NA		No		
					Operational		
SEFSC	CFMC	Caribbean Snappers	2012	2	Stock	No	Assessment of silk snapper delayed
					Assessment		
		Caribboan spiny labeter			Operational		
SEFSC	CFMC	Caribbean spiny lobster - Puerto Rico	2009	2	Stock	No	
		ruei to Nico			Assessment		

				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
		Caribbean spiny lobster -			Operational		
SEFSC	CFMC	St. Croix	2009	2	Stock	No	
		St. Cloix			Assessment		
		Caribbean spiny lobster -			Operational		
SEFSC	CFMC	St. Thomas/St. John	2009	2	Stock	No	
		3t. 1110111a3/3t. 301111			Assessment		
					Operational		
SEFSC	CFMC	Queen conch - Caribbean	2009	2	Stock	No	
					Assessment		
		Triggerfish and Filefish			Operational		
SEFSC	CFMC	Complex - Puerto Rico	2013	-1	Stock	No	
		Complex - Fuerto kico			Assessment		
		Triggerfish and Filefish			Operational		
SEFSC	CFMC	Complex - St. Croix	2013	-1	Stock	No	
		Complex - St. Croix			Assessment		
		Triggerfish and Filefish			Operational		
SEFSC	CFMC	Complex - St. Thomas/St.	2013	-1	Stock	No	
		John			Assessment		
		Duanna abairean Code af			Operational		
SEFSC	GMFMC	Brown shrimp - Gulf of	2019	5	Stock	Yes	
		Mexico			Assessment		
					Operational		
SEFSC	GMFMC	Gag - Gulf of Mexico	2014	6	Stock	No	Inadequate at the close of FY19
		-			Assessment		•
		0			Operational		
SEFSC	GMFMC	Gray triggerfish - Gulf of	2015	6	Stock	Yes	
		Mexico			Assessment		
		0			Operational		
SEFSC	GMFMC	Greater amberjack - Gulf	2017	6	Stock	Yes	
		of Mexico			Assessment		
					Operational		
SEFSC	GMFMC	Hogfish - Eastern Gulf of	2018	6	Stock	Yes	
		Mexico			Assessment		
		21.1.1.1.0.16.6			Operational		
SEFSC	GMFMC	Pink shrimp - Gulf of	2019	5	Stock	Yes	
		Mexico			Assessment		
		5 1 0 15 5			Operational		
SEFSC	GMFMC	Red grouper - Gulf of	2019	6	Stock	Yes	
		Mexico			Assessment		
					Operational		
SEFSC	GMFMC	Red snapper - Gulf of	2018	6	Stock	Yes	
		Mexico			Assessment		
		Developed shot 0.15 f			Operational		
SEFSC	GMFMC	Royal red shrimp - Gulf of	2018	2	Stock	No	Assessment recorded in error in Q2
		Mexico			Assessment		
					Operational		
SEFSC	GMFMC	Tilefish - Gulf of Mexico	2011	6	Stock	No	
					Assessment		
		14 19 6 16			Operational		
SEFSC	GMFMC	Vermilion snapper - Gulf	2016	6	Stock	Yes	
	1	of Mexico			Assessment		

				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
					Operational		
SEFSC	GMFMC	White shrimp - Gulf of	2019	5	Stock	Yes	
		Mexico			Assessment		
		Vallannadaa avannasi. Cirif			Operational		
SEFSC	GMFMC	Yellowedge grouper - Gulf of Mexico	2011	6	Stock	No	
		of Mexico			Assessment		
		Atlantic charmosa chark			Operational		Inadequate at the close of FY19
SEFSC	HMS	Atlantic sharpnose shark - Atlantic	2014	6	Stock	No	partial acceptance, status
		Atlantic			Assessment		determinations only
		Atlantic sharpnose shark -			Operational		Inadequate at the close of FY19
SEFSC	HMS	Gulf of Mexico	2014	6	Stock	No	partial acceptance, status
		Guil of Mexico			Assessment		determinations only
					Operational		
SEFSC	HMS	Blacknose shark - Atlantic	2011	6	Stock	No	
					Assessment		
		Blacknose shark - Gulf of			Operational		
SEFSC	HMS	Mexico	2011	-6	Stock	No	
		Mexico			Assessment		
					Operational		
SEFSC	HMS	Blacktip shark - Atlantic	2006	-6	Stock	No	
					Assessment		
		Blacktip shark - Gulf of			Operational		
SEFSC	HMS	Mexico	2018	6	Stock	Yes	
		Mexico			Assessment		
					Operational		
SEFSC	HMS	Blue shark - North Atlantic	2016	6	Stock	Yes	
					Assessment		
					Operational		Rejected results too uncertain to
SEFSC	HMS	Bonnethead - Atlantic	2013	-6	Stock	No	be considered adaquate
					Assessment		be considered adaquate
		Bonnethead - Gulf of			Operational		Rejected results too uncertain to
SEFSC	HMS	Mexico	2013	-6	Stock	No	be considered adaquate
		WICKIEG			Assessment		be considered adaquate
					Operational		
SEFSC	HMS	Dusky shark - Atlantic	2016	6	Stock	Yes	
					Assessment		
					Operational		
SEFSC	HMS	Finetooth shark - Atlantic	2008	3	Stock	No	
					Assessment		
					Operational		
SEFSC	HMS	Porbeagle - Atlantic	2010	6	Stock	No	
					Assessment		
			_		Operational		
SEFSC	HMS	Sandbar shark - Atlantic	2018	6	Stock	Yes	Atlantic and Gulf of Mexico stock
					Assessment		
		Scalloped Hammerhead			Operational		
SEFSC	HMS	Complex - Atlantic	2010	3	Stock	No	
		, - , , , , , , , , , , , , , , , , , ,			Assessment		
					Operational		
SEFSC	HMS	Shortfin mako - Atlantic	2018	6	Stock	Yes	
					Assessment		

-				Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes
. ,					Operational	·	
SEFSC	SAFMC	Black grouper - Southern	2010	6	Stock	No	Assessment planned for FY18
		Atlantic Coast			Assessment		delayed indefinitely
		BL 1 C 11			Operational		
SEFSC	SAFMC	Black sea bass - Southern	2018	6	Stock	Yes	
		Atlantic Coast			Assessment		
		Blueline tilefish - Southern			Operational		
SEFSC	SAFMC		2018	3	Stock	Yes	
		Atlantic Coast			Assessment		
		Duarrin na ali aliminan			Operational		
SEFSC	SAFMC	Brown rock shrimp -	2018	2	Stock	No	Assessment recorded in error in Q2
		Southern Atlantic Coast			Assessment		
		Daniera de dinasa Casadhana			Operational		
SEFSC	SAFMC	Brown shrimp - Southern	2018	2	Stock	No	Assessment recorded in error in Q2
		Atlantic Coast			Assessment		
		5 1 1 1 6 1 6 11			Operational		
SEFSC	SAFMC	Dolphinfish - Southern	2000	2	Stock	No	
		Atlantic Coast			Assessment		
					Operational		
SEFSC	SAFMC	Gag - Southern Atlantic	2014	6	Stock	No	Inadequate at the end of FY 19
		Coast			Assessment		•
					Operational		
SEFSC	SAFMC	Gray triggerfish -	2016	-6	Stock	No	
		Southern Atlantic Coast			Assessment		
					Operational		
SEFSC	SAFMC	Greater amberjack -	2008	5	Stock	No	
		Southern Atlantic Coast			Assessment		
					Operational		
SEFSC	SAFMC	Hogfish - Southeast	2015	6	Stock	Yes	
		Florida			Assessment		
					Operational		
SEFSC	SAFMC	Pink shrimp - Southern	2018	2	Stock	No	Assessment recorded in error in Q2
		Atlantic Coast		_	Assessment		
					Operational		
SEFSC	SAFMC	Red grouper - Southern	2017	6	Stock	Yes	
		Atlantic Coast			Assessment		
					Operational		
SEFSC	SAFMC	Red porgy - Southern	2013	6	Stock	No	
		Atlantic Coast			Assessment		
					Operational		
SEFSC	SAFMC	Red snapper - Southern	2016	6	Stock	Yes	Partial acceptance biomass
		Atlantic Coast			Assessment		estimates only
					Operational		
SEFSC	SAFMC	Snowy grouper - Southern	2014	6	Stock	No	Inadequate at the end of FY 19
		Atlantic Coast			Assessment		•
					Operational		
SEFSC	SAFMC	Speckled hind - Southern	2002	2	Stock	No	
		Atlantic Coast			Assessment		
		-u c · · ·			Operational		
SEFSC	SAFMC	Tilefish - Southern	2016	6	Stock	Yes	
		Atlantic Coast			Assessment		
	ı	1			, 1330331110110		

			·	Las	st Assessment		
Science			Fiscal	Model			
Center(s) ¹	Jurisdiction ²	Stock	Year	Class ³	Туре	Adequate?	Assessment Notes
CCITICI (3)	Jansaiction	Stock		0.000	Operational	Aucquate:	Assessment Notes
SEFSC	SAFMC	Vermilion snapper -	2018	6	Stock	Yes	
3LF3C	SAFIVIC	Southern Atlantic Coast	2016	U	Assessment	163	
CEECC	CAENAC	Warsaw grouper -	2002	,	Operational Stock	No	
SEFSC	SAFMC	Southern Atlantic Coast	2002	2		No	
					Assessment		
65566	645146	White shrimp - Southern	2040	2	Operational	l	
SEFSC	SAFMC	Atlantic Coast	2018	2	Stock	No	Assessment recorded in error in Q2
					Assessment		
	SAFMC/	Caribbean spiny lobster -		_	Operational		
SEFSC	GMFMC	Southern Atlantic Coast /	2011	-6	Stock	No	
		Gulf of Mexico			Assessment		
	SAFMC/				Operational		
SEFSC	GMFMC	Cobia - Gulf of Mexico	2013	6	Stock	No	
	GIVIFIVIC				Assessment		
	CAENAC/	Calaia Caustlaana Astanstia			Operational		
SEFSC	SAFMC/	Cobia - Southern Atlantic	2013	6	Stock	No	
	GMFMC	Coast			Assessment		
					Operational		
SEFSC	SAFMC/	King mackerel - Gulf of	2014	6	Stock	No	Inadequate at the end of FY 19
02.00	GMFMC	Mexico			Assessment		
					Operational		
SEFSC	SAFMC/	King mackerel - Southern	2014	6	Stock	No	Inadequate at the end of FY 19
3LI 3C	GMFMC	Atlantic Coast	2014	U	Assessment	140	madequate at the end of 11 13
		Mutton snapper -			Operational		
CEECC	SAFMC/	Southern Atlantic Coast /	2015		Stock	Vos	
SEFSC	GMFMC	· 1	2015	6		Yes	
		Gulf of Mexico			Assessment		
	SAFMC/	Spanish mackerel - Gulf of	2212		Operational		
SEFSC	GMFMC	Mexico	2013	6	Stock	No	
					Assessment		
	SAFMC/	Spanish mackerel -			Operational		
SEFSC	GMFMC	Southern Atlantic Coast	2013	6	Stock	No	
					Assessment		
	SAFMC/	Yellowtail snapper -			Operational		
SEFSC	GMFMC	Southern Atlantic Coast /	2013	6	Stock	No	
	CIVII IVIC	Gulf of Mexico			Assessment		
		Northern anchovy -			Operational		
SWFSC	PFMC	Southern Pacific Coast	1995	2	Stock	No	
		Journal Facilit Coast			Assessment		
		Onalossant inchara saud			Operational		
SWFSC	PFMC	Opalescent inshore squid -	2007	2	Stock	No	
		Pacific Coast			Assessment		
		5 (6 1 1 1			Operational		
SWFSC	PFMC	Pacific chub mackerel -	2019	6	Stock	Yes	
		Pacific Coast			Assessment		
					Operational		
SWFSC	PFMC	Pacific sardine - Pacific	2019	6	Stock	Yes	
		Coast			Assessment		
					/ 1330331110110		

				Las	st Assessment		
Science			Fiscal	Model			
Center(s)	¹ Jurisdiction ²	Stock	Year	Class ³	Type	Adequate?	Assessment Notes

Footnotes

¹ NOAA Fisheries Science Centers include Alaska Fisheries Science Center (AFSC), Northeast Fisheries Science Center (NEFSC), Northwest Fisheries Science Center (NWFSC), Pacific Islands Fisheries Science Center (PIFSC), Southeast Fisheries Science Center (SEFSC) and Southwest Fisheries Science Center (SWFSC). In some cases, assessments are conducted by multiple science centers (e.g. NW/SW and SW/PI).

²Jurisdictions include Caribbean Fishery Management Council (CFMC), Gulf of Mexico Fishery Management Council (GMFMC), Atlantic Highly Migratory Species Division (HMS), Mid-Atlantic Fishery Management Council (MAFMC), New England Fishery Management Council (NEFMC), North Pacific Fishery Management Council (NPFMC), Pacific Fishery Management Council (PFMC), South Atlantic Fishery Management Council (SAFMC) and Western Pacific Fishery Management Council (WPFMC).

³Level of complexity of assessment methods used for the particular stock. Generally reflects the availability of data and the value or importance of the fishery. Levels are described in the Stock Assessment Improvement Plan https://spo.nmfs.noaa.gov/content/tech-memo/SAIP2018. A negative level indicates that an assessment was attempted at that level of complexity, but the effort was not accepted in its technical review.

^{*}Changes are indicated by red, bold font.

Appendix E. Surveys completed by NOAA Fisheries broken out by quarter for FY2019

		FY2019	
Completed	surveys FY 2	019 Quarter 1 (October - December, 2018)	
Science Center(s) ¹	Vessel Toma	Summer	Notes
	Vessel Type	Survey	Notes
NEFSC	Charter	Northeast Ecosystem Monitoring (EcoMon)_Fall	NOAA Vassal Haraw D
NEFSC	NOAA Vessel	NEFSC Bottom Trawl Survey Autumn -	NOAA Vessel Henry B.
		October/November component	Bigelow
NWFSC	Charter	West Coast Groundfish Bottom Trawl Survey 2018 Survey Pass 2	
PIFSC	NOAA Vessel	MHI Bottomfish SE-18-06	NOAA Vessel Oscar Elton Sette
SEFSC	NOAA Vessel	SEAMAP Fall Shrimp/Bottomfish Survey	NOAA Vessel Oscar Elton Sette
SWFSC	Charter	California Cooperative Fisheries Investigations (CalCOFI) Fall	
Completed	surveys FY 2	019 Quarter 2 (January - March, 2019)	
Science			
Center(s) ¹	Vessel Type	Survey	Notes
AFSC	Charter	Movement and Migration of Key Alaska Fisheries	Completed early
AF3C	Charter	Woverhellt and Wightton Of Key Alaska Fisheries	Originally planned for Q4
AFSC	NOAA Vessel	Walleye Pollock Shelikof/Chirikof Shelf-break (GOA) Prespawning Survey	NOAA Vessel Oscar Dyson
SWFSC	Charter	U.S. Antarctic Marine Living Resources Program	
SWFSC	NOAA Vessel	California Cooperative Fisheries Investigations (CalCOFI) Winter	NOAA Vessel Reuben Lasker
Completed	surveys FY 2	019 Quarter 3 (April - June, 2019)	
Science			
Center(s) ¹	Vessel Type	Survey	Notes
AFSC	NOAA Vessel	EMA-FOCI Larval Groundfish Assessment(concatenated two cruises to a single cruise: formerly Eco FOCI_Gulf of Alaska Late Larval Pollock Survey and Eco FOCI Bering Sea Zoo- and Ichthyoplankton Survey)	NOAA Vessel Oscar Dyson
NEFSC	Charter	Cooperative Research Survey - Longline	Not on intial schedule
NEFSC	Charter	Integrated Benthic Habitat and Sea Scallop Resource	Completed early
INLIGE	Charter	Assessment Survey	Originally planned for Q4
NEFSC	NOAA Vessel	NEFSC Spring Bottom Trawl Survey	NOAA Vessel Henry B. Bigelow
NEFSC	NOAA Vessel	Northeast Ecosystem Monitoring (EcoMon)_Spring	NOAA Vessel Henry B. Bigelow
NWFSC	Charter	West Coast Groundfish Bottom Trawl Survey 2019 Pass 1	Completed early Originally planned for Q4
NWFSC	Charter	West Coast Groundfish Bottom Trawl Survey 2019 Pass 2	Completed early Originally planned for Q4

NIVATECC	AVESC NIOAA Vassal 2010 kwasila Salaa	2010 Lucionilo Colmon P. Occon Foresistam Cumiou	NOAA Vessel Bell M.
NWFSC	NOAA Vessel	2019 Juvenile Salmon & Ocean Ecosystem Survey	Shimada

	Completed surveys FY 2019 Quarter 3 (April - June, 2019)			
Science				
Center(s) ¹	Vessel Type	Survey	Notes	
		Northern California Current (NCC) Ecosystem	NOAA Vessel Bell M.	
NWFSC	NOAA Vessel	Forecasting Survey Spring/Summer Upwelling Season	Shimada	
		Survey	Siliilada	
			NOAA Vessel Oscar Elton	
			Sette, Originally scheduled	
PIFSC	NOAA Vessel	Hawaiian Archipelago Life History	for American Samoa,	
			Completed early	
			Originally planned for Q4	
CEECC		SEAMAP (Southeast Area Monitoring and Assessment	NOAA Waasal Oosaa a II	
SEFSC	NOAA Vessel	Program) Spring Plankton Survey	NOAA Vessel Oregon II	
CIAIECC	NO A A Marcal	California Cooperative Fisheries Investigations (CalCOFI)	NGAA Vaaral Barbard and	
SWFSC	NOAA Vessel	Spring	NOAA Vessel Reuben Lasker	
CVA/ECC	NOAAMaaal	Lucarila Daalafiah Cuman	NOAA Vaaaal Baulaan Laaluun	
SWFSC	NOAA Vessel	Juvenile Rockfish Survey	NOAA Vessel Reuben Lasker	
	surveys FY 2	019 Quarter 4 (July - September, 2019)		
Science				
Center(s) ¹	Vessel Type	Survey	Notes	
AFSC	Charter	Arctic Integrated Ecosystem Survey		
AFSC	Charter	BASIS Northern Bering Sea		
AFSC	Charter	Eastern Bering Sea Groundfish and Crab Bottom Trawl		
		Survey		
AFSC	Charter	GOA/EBS/AI Longline Stock Assessment Survey		
AFSC	Charter	Gulf of Alaska Groundfish Bottom Trawl Survey		
AFSC	Charter	Gulf of Alaska - Southeast Coastal Monitoring age-0		
711 30	Charter	groundfish and salmon recruitment processes		
AFSC	Charter	Northern Bering Sea Groundfish and Crab Bottom Trawl		
Aisc	Charter	Survey - Charter Vessel 1		
AFSC	NOAA Vessel	EMA-FOCI age-0 groundfish and salmon recruitment	NOAA Vessel Oscar Dyson	
Albe		processes (formerly known as BASIS)	NOAA VESSEI OSCAI DYSOII	
AFSC	NOAA Vessel	Walleye Pollock GOA Summer Survey	NOAA Vessel Oscar Dyson	
NEFSC	Charter	Surf Clam & Ocean Quahog Dredge Survey		
NEFSC	NOAA Vessel	ASMFC Northern Shrimp Survey	NOAA Vessel Gloria Michelle	
NEFSC			NOAA Vessel Henry B.	
	NOAA Vessel	Fall Bottom Trawl Survey	Bigelow	
		Northeast Ecosystem Monitoring (EcoMon)_Summer	NOAA Vessel Henry B.	
NEFSC	NOAA Vessel		Bigelow	
		Northern California Current (NCC) Ecosystem	-	
NWFSC	NOAA Vessel	Forecasting Survey Autumn End of Upwelling Season	NOAA Vessel Bell M.	
	1707 1 00001	Survey	Shimada	
		341707		

Completed surveys FY 2019 Quarter 4 (July - September, 2019)			
Science Center(s) ¹	Vessel Type	Survey	Notes
NWFSC	NOAA Vessel	The Integrated Ecosystem and Pacific Hake Acoustic Trawl Survey, formerly the Pacific Hake Spawning Biomass Acoustic Survey, is the only source of fisheries independent data and is used to manage the Hake Stock	NOAA Vessel Bell M. Shimada
PIFSC	NOAA Vessel	Main Hawaiian Islands Insular Bottomfish	NOAA Vessel Oscar Elton Sette
SEFSC	Charter	Panama City Laboratory Reef Fish Trap / Video	
SEFSC	Charter	SouthEast Fishery-Independent Survey (SEFIS) - charter	
SEFSC	NOAA Vessel	SEAMAP (Southeast Area Monitoring and Assessment Program) Fall Plankton Survey	NOAA Vessel Pisces
SEFSC	NOAA Vessel	SEAMAP Gulf of Mexico Reef Fish	NOAA Vessel Pisces
SEFSC	NOAA Vessel	SEAMAP Summer Groundfish	NOAA Vessel Oregon II
SEFSC	NOAA Vessel	SEFSC Shark/Red Snapper Bottom Longline Survey	NOAA Vessel Oregon II
SEFSC	NOAA Vessel	SouthEast Fishery-Independent Survey (SEFIS) - NOAA ship	NOAA Vessel Pisces
SWFSC	Charter	California Cooperative Fisheries Investigations (CalCOFI) Summer	
SWFSC	NOAA Vessel	West Coast Pelagic Fish Survey	NOAA Vessel Reuben Laske
ootnotes			

¹ NOAA Fisheries Science Centers include Alaska Fisheries Science Center (AFSC), Northeast Fisheries Science Center (NEFSC), Northwest Fisheries Science Center (NWFSC), Pacific Islands Fisheries Science Center (PIFSC), Southeast Fisheries Science Center (SEFSC) and Southwest Fisheries Science Center (SWFSC).

^{*} Changes are highlighted in bold, red text

Appendix F. NOAA Fisheries planned surveys broken out by quarter for FY2019					
Planned s	urveys FY 201	9 Quarter 1 (October - December, 2018)			
Science					
Center(s) ¹	Vessel Type	Survey	Notes		
NEFSC	Charter	Northeast Ecosystem Monitoring (EcoMon)_Fall			
NEFSC	NOAA Vessel	NEFSC Bottom Trawl Survey Autumn - October/November component	NOAA Vessel Henry B. Bigelow		
NWFSC	Charter	West Coast Groundfish Bottom Trawl Survey 2018 Survey Pass 2	2.80.0.11		
PIFSC	NOAA Vessel	MHI Bottomfish SE-18-06	NOAA Vessel Oscar Elton Sette		
SEFSC	NOAA Vessel	SEAMAP Fall Shrimp/Bottomfish Survey	NOAA Vessel Oregon II		
SWFSC	Charter	California Cooperative Fisheries Investigations (CalCOFI) Fall			
Planned s	urveys FY 201	9 Quarter 2 (January - March, 2019)			
Science					
Center(s) ¹	Vessel Type	Survey	Notes		
AFSC	Charter	Movement and Migration of Key Alaska Fisheries	Completed early Originally planned for Q4		
AFSC	NOAA Vessel	Walleye Pollock Kenai/PWS (GOA) Pre spawning Survey	NOAA Vessel Oscar Dyson, Not Completed		
AFSC	NOAA Vessel	Walleye Pollock Shelikof/Chirikof Shelf-break (GOA) Prespawning Survey	NOAA Vessel Oscar Dyson, Completed early Originally planned for Q3		
AFSC	NOAA Vessel	Walleye Pollock Shumagin/Sanak (GOA) Pre-spawning- Survey	NOAA Vessel Oscar Dyson, Not Completed		
NWFSC	NOAA Vessel	Northern California Current (NCC) Ecosystem Forecasting Survey Winter Preconditioning Survey	NOAA Vessel Bell M. Shimada, Not Completed		
SWFSC	Charter	U.S. Antarctic Marine Living Resources Program			
SWFSC	NOAA Vessel	California Cooperative Fisheries Investigations (CalCOFI) Winter	NOAA Vessel Reuben Lasker		
Planned s	Planned surveys FY 2019 Quarter 3 (April - June, 2019)				
Science Center(s) ¹	Vessel Type	Survey	Notes		
AFSC	Charter	EGOA spring sablefish	Not Completed		
AFSC	NOAA Vessel	EMA-FOCI Larval Groundfish Assessment(concatenated two cruises to a single cruise: formerly Eco FOCI_Gulf of Alaska Late Larval Pollock Survey and Eco FOCI Bering Sea Zooand Ichthyoplankton Survey)	NOAA Vessel Oscar Dyson		
AFSC	NOAA Vessel	Walleye Pollock Shelikof/Chirikof Shelf-break (GOA) Pre- spawning Survey	NOAA Vessel Oscar Dyson, Completed early Q2		
Planned surveys FY 2019 Quarter 3 (April - June, 2019)					

Science			
Center(s) ¹	Vessel Type	Survey	Notes
NEFSC	Charter	Cooperative Research Survey - Longline	Not on intial schedule
NEFSC	Charter	Integrated Benthic Habitat and Sea Scallop Resource Assessment Survey	Completed early Originally planned for Q4
NEFSC	NOAA Vessel	NEFSC Spring Bottom Trawl Survey	NOAA Vessel Henry B. Bigelow NOAA Vessel Henry B.
NEFSC	NOAA Vessel	Northeast Ecosystem Monitoring (EcoMon)_Spring	Pigolow
NWFSC	Charter	Northern California Current Pelagic Ecosystem Survey	Not Completed
NWFSC	Charter	West Coast Groundfish Bottom Trawl Survey 2019 Pass 1	Completed early Originally planned for Q4
NWFSC	Charter	West Coast Groundfish Bottom Trawl Survey 2019 Pass 2	Completed early Originally planned for Q4
NWFSC	NOAA Vessel	2019 Juvenile Salmon & Ocean Ecosystem Survey	NOAA Vessel Bell M. Shimada, Completed early Originally planned for Q4
NWFSC	NOAA Vessel	Northern California Current (NCC) Ecosystem Forecasting Survey Spring/Summer Upwelling Season Survey	NOAA Vessel Bell M. Shimada, Not Completed
PIFSC	NOAA Vessel	ESA Corals & Reef Fish	NOAA Vessel Oscar Elton Sette, Not Completed
PIFSC	NOAA Vessel	Hawaiian Archipelago Life History	NOAA Vessel Oscar Elton Sette, Completed early Originally planned for Q4
SEFSC	NOAA Vessel	SEAMAP Gulf of Mexico Reef Fish	NOAA Vessel Pisces, Delayed to Q4
SEFSC	NOAA Vessel	SEAMAP (Southeast Area Monitoring and Assessment Program) Spring Plankton Survey	NOAA Vessel Oregon II
SWFSC	NOAA Vessel	California Cooperative Fisheries Investigations (CalCOFI) Spring	NOAA Vessel Reuben Lasker
SWFSC	NOAA Vessel	Juvenile Rockfish Survey	NOAA Vessel Reuben Lasker, Completed early - Originally planned for Q4

	urveys FY 201	9 Quarter 4 (July - September, 2019)	
Science			
Center(s) ¹	Vessel Type	Survey	Notes
AFSC	Charter	Arctic Integrated Ecosystem Survey	
AFSC	Charter	BASIS Northern Bering Sea	
AFSC	Charter	Eastern Bering Sea Groundfish and Crab Bottom Trawl	
AF3C	Charter	Survey	
AFSC	Charter	GOA/EBS/AI Longline Stock Assessment Survey	
AFSC	Charter	Gulf of Alaska Groundfish Bottom Trawl Survey	
۸۳۵۵	Chartan	Gulf of Alaska - Southeast Coastal Monitoring age-0	
AFSC	Charter	groundfish and salmon recruitment processes	
AFSC	Charter	Movement and Migration of Key Alaska Fisheries	Completed early Q2
		Northern Bering Sea Groundfish and Crab Bottom Trawl	, , ,
AFSC	Charter	Survey - Charter Vessel 1	
		EMA-FOCI age-0 groundfish and salmon recruitment	
AFSC	NOAA Vessel	processes (formerly known as BASIS)	NOAA Vessel Oscar Dyson
AFSC	NOAA Vessel	Walleye Pollock GOA Summer Survey	NOAA Vessel Oscar Dyson
NEFSC	Charter	Integrated Benthic Habitat and Sea Scallop Resource	Completed cody 03
IVEFSC	Charter	Assessment Survey	Completed early Q3
NEFSC	Charter	Surf Clam & Ocean Quahog Dredge Survey	
NEECC	NOAA Vaasal	ACNAEC Nightham Chaire Comme	NOAA Vessel Gloria
NEFSC	NOAA Vessel	ASMFC Northern Shrimp Survey	Michelle
NEECC	NOAAN	S. II D. II T I C	NOAA Vessel Henry B.
NEFSC	NOAA Vessel	Vessel Fall Bottom Trawl Survey	Bigelow
			NOAA Vessel Henry B.
NEFSC	NOAA Vessel	Northeast Ecosystem Monitoring (EcoMon)_Summer	Bigelow
NWFSC	Charter	Southern California Shelf Rockfish Hook and Line Survey	Delayed to FY2020
NWFSC	Charter	West Coast Groundfish Bottom Trawl Survey 2019 Pass 1	Completed early Q3
NWFSC	Charter	West Coast Groundfish Bottom Trawl Survey 2019 Pass 2	Completed early Q3
NWFSC	NOAA Vessel	2019 Juvenile Salmon & Ocean Ecosystem Survey	NOAA Vessel Bell M. Shimada, Completed early Q3
		The Integrated Ecosystem and Pacific Hake Acoustic Trawl	
NIMESC	NOAA Vossal	Survey, formerly the Pacific Hake Spawning Biomass	NOAA Vessel Bell M.
NWFSC	NOAA Vessel	Acoustic Survey, is the only source of fisheries independent	Shimada
		data and is used to manage the Hake Stock	
			NOAA Vossal Ball NA
NWFSC	NOAA Vessel	Northern California Current (NCC) Ecosystem Forecasting	NOAA Vessel Bell M.
		Survey Autumn End of Upwelling Season Survey	Shimada

Science			
Center(s) ¹	Vessel Type	Survey	Notes
PIFSC	NOAA Vessel	Hawaiian Archipelago Life History	NOAA Vessel Oscar Eltor Sette, Originally scheduled for American Samoa, Completed early Q3
PIFSC	NOAA Vessel	Main Hawaiian Islands Insular Bottomfish	Not on Initial Schedule, NOAA Vessel Oscar Elton Sette
SEFSC	Charter	Panama City Laboratory Reef Fish Trap / Video	Not on Initial Schedule
SEFSC	Charter	SouthEast Fishery-Independent Survey (SEFIS) - charter	
SEFSC	NOAA Vessel	SEAMAP (Southeast Area Monitoring and Assessment Program) Fall Plankton Survey	NOAA Vessel Pisces
SEFSC	NOAA Vessel	SEFSC Shark/Red Snapper Bottom Longline Survey	NOAA Vessel Oregon II
SEFSC	NOAA Vessel	SEAMAP Summer Groundfish	NOAA Vessel Oregon II
SEFSC	NOAA Vessel	SouthEast Fishery-Independent Survey (SEFIS) - NOAA ship	NOAA Vessel Pisces
SWFSC	Charter	California Cooperative Fisheries Investigations (CalCOFI) Summer	
SWFSC	Charter	Highly Migratory Species (HMS)	Not Completed
SWFSC	NOAA Vessel	Juvenile Rockfish Survey	NOAA Vessel Reuben Lasker, Completd early Q3
SWFSC	NOAA Vessel	West Coast Pelagic Fish Survey	NOAA Vessel Reuben Lasker

¹ NOAA Fisheries Science Centers include Alaska Fisheries Science Center (AFSC), Northeast Fisheries Science Center (NEFSC), Northwest Fisheries Science Center (NWFSC), Pacific Islands Fisheries Science Center (PIFSC), Southeast Fisheries Science Center (SEFSC) and Southwest Fisheries Science Center (SWFSC).

^{*} Changes are highlighted in bold, red text

