



# NOAA FISHERIES

## Science and Technology

**Stock assessments provide the scientific basis for fisheries management. At the end of FY2015 Quarter 1, 129 FSSI 2.0 stocks (64.8%) have adequate assessments.**

### What is a stock assessment?

A stock assessment is the process of collecting, analyzing, and reporting information about fish stocks to determine changes in the stocks due to fishing and, to the extent possible, predict future trends in abundance and catch. NOAA Fisheries' scientists work with other scientists, fishermen, resource managers and others from around the country and world to ensure NOAA stock assessments represent the best science information available.

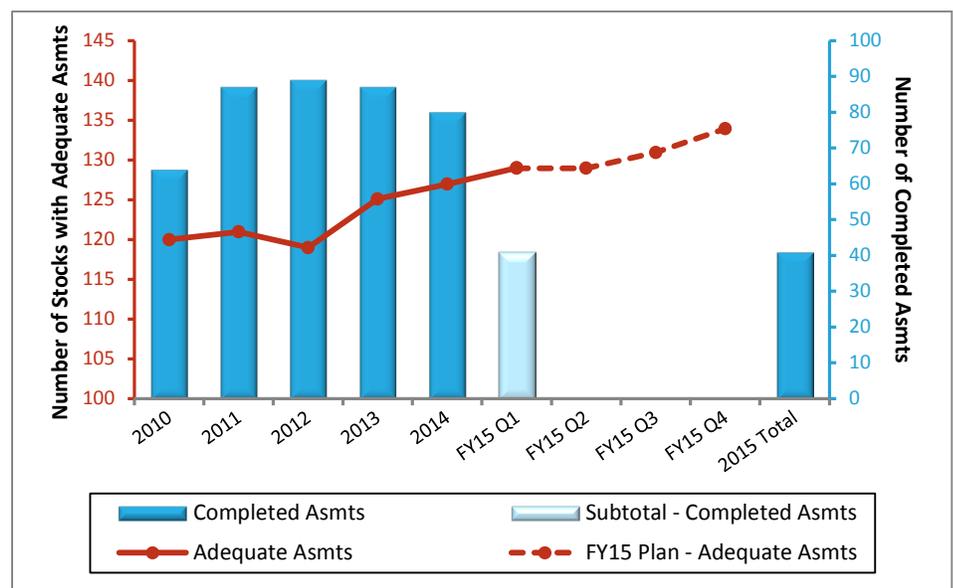
# Fish Assessment Report

## FY 2015 Quarter 1 Update

### Assessment Overview

Stock assessments provide important science information necessary for the conservation and management of fish stocks. NOAA Fisheries' stock assessments are used as the scientific basis for determining the status of Federally-managed fish stocks and to guide the setting of annual catch limits that will prevent overfishing and attain optimum yield from our Nation's fisheries. This report summarizes NOAA Fisheries' stock assessment efforts for stocks listed on the Fish Stock Sustainability Index 2.0 (FSSI 2.0) as well as non-FSSI stocks and stock complexes.

The FSSI 2.0 represents 199 of the country's top fishery stocks, selected for inclusion based on their importance to commercial and recreational fisheries. The percentage of FSSI stocks with adequate assessments, which is updated quarterly and annually, is used to track performance of the NOAA Fisheries national stock assessment enterprise. Fiscal Year (FY) 2015 began in October 2014 with 63.8% of FSSI 2.0 stocks (127/199) with adequate assessments. This number is anticipated to slightly increase in FY2015, with several new or improved stock assessments throughout the year offsetting losses due to expiring assessment adequacy at year's end. Just over 90 assessments of FSSI 2.0 stocks are planned for FY2015 to support fisheries management (including annual catch limits) and status determinations. Additional assessments will be conducted to support management of selected non-FSSI stocks, for a total of 185 assessments planned in FY2015. For a summary of changes (both positive and negative) to the list of FSSI stocks with adequate assessments in FY2015, please see Table 1. Assessment activity



Recent assessment activity for FSSI stocks through the end of FY2015, Quarter 1.

## Why assess stocks?

NOAA Fisheries' stock assessments are key to marine resource management. They provide high-quality science information to managers to answer importance questions such as:

- What is the current status of a stock relative to established limits?
- How much catch is sustainable while maintaining a healthy stock?
- If a stock becomes depleted, what steps are necessary to rebuild it to healthy abundance levels?

Answers to these questions help managers make the best decisions to ensure sustainable fisheries, healthy ecosystems, and productive coastal communities.

## Adequate assessments

Fish stock assessments provide the technical basis for determining stock status and forecasting the level of acceptable biological catch (ABC) that will prevent overfishing. The amount of data available to conduct stock assessments varies tremendously across the ~500 Federally-managed stocks and even within the 199 FSSI 2.0 stocks.

Although any assessment effort provides important information to resource managers, assessments must meet minimum standards of data availability and modeling complexity to be considered adequate. Generally, a minimally adequate assessment can be conducted where there is good information on the level of annual catch and an indicator of the degree of change in stock abundance over time (for more information, see the [Marine Fisheries Stock Assessment Improvement Plan](#)).

Assessments also need to be updated periodically to track natural fluctuations and ensure timely management advice. For the purposes of this report, five years is used as a nominal window beyond which the adequacy of an assessment is considered to have expired. In reality, many important stocks are updated more frequently.

Lastly, all assessments are expected to be validated by a regional review system before being considered as the best scientific information available regarding the status of the stock.

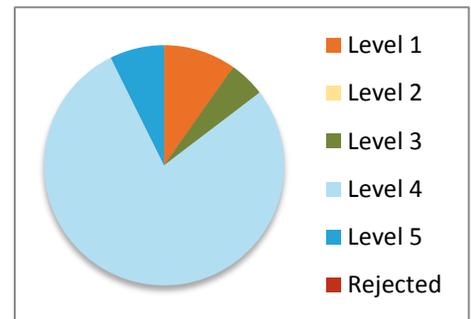
for FSSI 2.0 stocks in FY2015 is listed in Appendix A, Appendix B lists the current assessment status for all FSSI 2.0 stocks, and Appendix C lists assessments completed to date during FY2015 for non-FSSI stocks.

### Quarter 1 (October–December, 2014)

A total of 41 assessments were completed in Quarter 1 for FSSI 2.0 stocks (Appendix A). Of these, over 90% were completed at an adequate level (i.e. assessment level 3 or above). The FSSI 2.0 assessments included updates of Alaska stocks (34/41); updates of four New England stocks; an assessment of a member of the Caribbean Groupers complex (red hind); and assessments of hogfish in the Southeastern U.S. (led by the State of Florida) that redefine stock structure for the species on the basis of new genetic information. These hogfish assessments added two new stocks to the list of adequately assessed stocks and increase the total number of FSSI 2.0 stocks with adequate assessments to 129 at the end of the first quarter. In addition, 26 assessments were conducted for non-FSSI stocks and stock complexes, bringing the total number of stock assessments completed in Quarter 1 to 67.

### What's Next?

In Quarter 2, NOAA Fisheries plans to complete three assessments of FSSI 2.0 stocks and 63 assessments for non-FSSI stocks. The FSSI 2.0 stock assessments to be completed include annual updates for two stocks of Pacific Coast Chinook salmon and an annual update for Norton Sound red king crab. The 63 non-FSSI stock assessments to be completed are for Pacific Coast salmon stocks. In addition, ongoing data analysis and modeling activities during Quarter 2 will support the completion of 47 assessments of FSSI 2.0 stocks and six assessments of non-FSSI stocks planned for the last two quarters of FY2015 (Quarters 3 and 4).



*Level of assessments completed (41 to date in FY2015) for FSSI 2.0 stocks. 90.2% of the stock assessments completed so far in FY2015 have been at an adequate level (i.e. Level 3 or greater). Assessment levels are defined as: 1=index only (commercial or research CPUE); 2=simple life history equilibrium models; 3=aggregated production models; 4=size/age/stage-structured models; and 5=models incorporating ecosystem considerations and spatial and seasonal analyses. For details, see the [Marine Fisheries Stock Assessment Improvement Plan](#).*

### Highlight: NOAA Fisheries Stock Assessment Science Program Reviews

In January 2013, NOAA Fisheries initiated a systematic science program review process at all six regional science centers and its headquarters Office of Science and Technology (OST), covering five key elements of the Agency's science enterprise over a six-year cycle. These systematic reviews of our science programs are important to improve integration, identify best practices, and ensure NOAA Fisheries is able to provide the best available science. The review process is conducted by a panel of our peers, including experts from within and outside the agency, and provides opportunities for public involvement, which is part of our broader dialogue with fishery management councils, fishing industry, and other stakeholders.

The FY2013 stock assessment data collection and FY2014 fishery stock assessment process reviews completed a 2-year evaluation of our fishery data collection and stock assessment programs across the Agency. In response to these reviews, NOAA Fisheries is taking action in the following major areas to improve our data collection and stock assessment science:

- Develop and implement a plan for comprehensive data management and informatics systems
- Rationalize data analysis workloads and schedules
- Continue to develop Science Center and OST strategic planning efforts, with particular focus on creating consistent protocols for prioritization of research
- Prioritize fishery stock assessments
- Standardize, streamline, and simplify the stock assessment process to increase throughput
- Use Management Strategy Evaluations (MSEs) and additional analyses to better align survey and data collection efforts with assessment needs and evaluate stock assessment processes
- Retain and increase workforce capacity for data collection and stock assessment programs

These actions are focused on national cross-cutting themes identified in three or more Centers including OST. Other actions are being taken to address recommendations specific to each Center and OST. Additional information on the science program reviews, including the review reports, individual Center and OST responses, and the national responses, can be viewed at <http://www.st.nmfs.noaa.gov/science-program-review/>. Topics of protected species, ecosystems and climate, and economics and social science will be covered in 2015-2017.

**Table 1: Assessments affecting the number of FSSI stocks with adequate assessments in FY2015**

Quarter	Fishery Council	Fishery Management Plan	Stock Name and Area	Adequate?		Change	Notes on Assessment
				Previous	Current		
1	GMFMC	Reef Fish Resources of the Gulf of Mexico	Hogfish - Eastern Gulf of Mexico	No	Yes	+1	Delayed from FY14
1	SAFMC	Snapper-Grouper Fishery of the South Atlantic Region	Hogfish - Southeast Florida	No	Yes	+1	Delayed from FY14
<b>Quarter 1 Projected Number of Stocks with Adequate Assessments = 129; Actual = 129</b>							

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**For more detailed information on fish stock assessments, please visit:**

<http://www.st.nmfs.noaa.gov/stock-assessment/index>

<https://www.st.nmfs.noaa.gov/sisPortal/>

