



Public Hearing Guide: Shrimp Amendment 15 - Status Determination Criteria for Penaeid Shrimp and Adjustments to the Shrimp Framework Procedure

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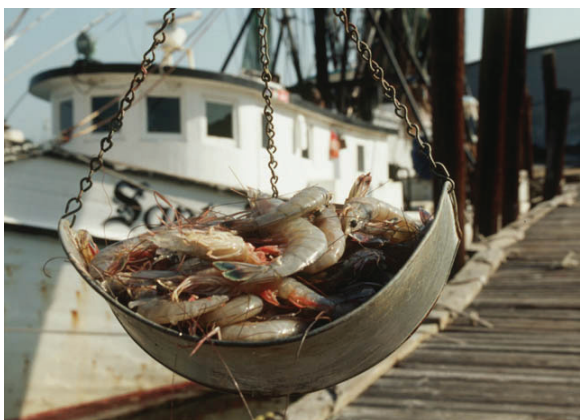


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What is a Public Hearing?

A public hearing gives you an opportunity to comment on a fishery management plan or amendment that the Gulf of Mexico Fishery Management Council is developing. Public hearings are conducted after the Council has selected a preferred alternative for each proposed action and comments should focus on possible benefits and drawbacks of the alternatives contained in each action. Suggestions, issues, and concerns expressed during the public hearings will be presented to the Council for review and consideration before final action is taken.

How does a public hearing affect fisheries management?

Comments provided during the public hearing process are reported to the full Council prior to final action. Your input is considered as the Council deliberates and chooses the most appropriate management measures to address the issue(s) at hand.

How else can I get involved?

There are many ways you can help the Gulf of Mexico Fishery Management Council identify fishery management needs and develop reasonable management alternatives, each dependent on how actively involved you want to become. The first step to becoming involved is to educate yourself about the management process by visiting our website at www.gulfcouncil.org, signing up to receive our communications, and contacting Council members and staff to discuss management. You can attend meetings, serve on panels and committees that advise the Council on fishery issues, and even apply to become a Council member.

Introduction

The parameters typically applied to stock assessments to determine stock size are difficult to apply to penaeid shrimp because they are short-lived and populations are highly influenced by environmental factors and catch rates. Historically, shrimp stocks have been assessed with a virtual population analysis that determines the health of a stock using the number of parent shrimp.

Brown shrimp, white shrimp, and pink shrimp stock levels have been monitored since 1970, and each year the number of parent shrimp in each stock have been higher than the overfished and overfishing thresholds. However, in 2007 the virtual population analysis incorrectly determined that pink shrimp was undergoing overfishing because low fishing effort was not accommodated by the analysis.

In response, the Gulf Council's Scientific and Statistical Committee decided to use a new stock assessment model called the Stock Synthesis model to determine the status of penaeid shrimp stocks. Now, the overfished and overfishing thresholds for penaeid shrimp need to be revised so that the status of brown, white, and pink shrimp are consistent with the outputs of the new stock assessment model.

Definitions:

Fishing Mortality Rate (F) - A measurement of the rate of removal from a population by fishing.

Maximum Fishing Mortality Threshold (MFMT) - The amount of fishing mortality (catch + dead discards) that can occur to achieve maximum sustainable yield. If current fishing mortality rates are above the fishing mortality threshold, then overfishing is occurring.

Minimum Stock Size Threshold (MSST) - The minimum stock size at which stock rebuilding will occur within the required timeline while fishing at the maximum fishing mortality threshold. If current stock size is below the stock size threshold, the stock is overfished.

Action 1.1 - Modify the Overfishing Threshold

Alternative 1: No action – The overfishing threshold is defined as a rate of fishing that results in the parent stock number being reduced below the maximum sustainable yield minimum levels listed below:

- a. brown shrimp – 125,000,000 individuals (November – February)
- b. white shrimp – 330,000,000 individuals (May – August)
- c. pink shrimp – 100,000,000 individuals (July – June)

Alternative 2: Define the overfishing threshold as the maximum apical fishing mortality rate (F) computed for the fishing years 1984-2012 plus the 95% confidence limits. The values will be updated every 5 years through the framework procedure, but only the reference years of 1984-2012 will be used to define F. A stock will not be considered undergoing overfishing unless the F rate is exceeded for two consecutive years. The following are calculated by adding apical F values and confidence limits for each species:

- a. brown shrimp – F: 3.68
- b. white shrimp – F: 0.77
- c. pink shrimp – F: 0.20

Alternative 3: Define the overfishing threshold as the maximum apical fishing mortality rate (F) computed for the years 1984-2012. The values will be updated every 5 years through the framework procedure, but only the reference years of 1984-2012 will be used to define F. A stock will not be considered undergoing overfishing unless the F rate is exceeded for two consecutive years.

- a. brown shrimp – 3.54
- b. white shrimp – 0.76
- c. pink shrimp – 0.20



Action 1.2 - Modify the Overfished Threshold

Alternative 1: No Action – Overfished condition occurs when a parent stock number falls below one-half of the overfishing definition listed below.

- a. brown shrimp – 63,000,000 individuals (November – February)
- b. white shrimp – 165,000,000 individuals (May – August)
- c. pink shrimp – 50,000,000 individuals (July – June)

Alternative 2: Define the MSST as the minimum total annual spawning biomass minus the 95% confidence limit for the fishing years 1984 – 2012. The values for each species will be updated every 5 years through the framework procedure, but only the reference years of 1984-2012 will be used to define MSST. A stock will not be considered overfished unless the MSST value is below the specified value for two consecutive years. The following are calculated using the MSST value minus the confidence limit:

- a. brown shrimp – 10,944 tons of tails
- b. white shrimp – 125,229 tons of tails
- c. pink shrimp – 14,035 tons of tails

Alternative 3: Define the MSST as the minimum total annual spawning biomass for the fishing years 1984 – 2012. The values for each species will be updated every 5 years through the framework procedure, but only the reference years of 1984-2012 will be used to define MSST. A stock will not be considered overfished unless the MSST value is below the specified value for two consecutive years.

- a. brown shrimp – 11,166 tons of tails
- b. white shrimp - 125,535 tons of tails
- c. pink shrimp – 17,502 tons of tails

Introduction to Shrimp Framework Procedure Adjustments

A fishery management plan framework procedure allows changes to be made to specific management measures or parameters more efficiently than they can be made through a full plan amendment. The Council has determined that modifications to accountability measures should be included in the frameworks for fishery management plans. The reef fish and coastal migratory pelagic frameworks have already been modified and the Council is now considering making the same changes to the shrimp fishery management plan.



Action 2 - Modify the Shrimp Fishery Management Plan Framework Procedure

Alternative 1: No Action

Alternative 2: Make editorial changes to reflect changes to Council advisory panels and committees and modify the shrimp framework to allow adjustments to the following royal red shrimp accountability measures. Accountability measures that could be implemented or changed would include:

In-Season

- Closure and closure procedures
- Trip limit implementation or change
- Gear restrictions

Post-Season

- Season length adjustments
- Closed season implementation
- Trip/possession limit implementation
- ACL/ACT overage reductions
- Revocation of ACL/ACT increases due to overage
- Gear restrictions
- Reporting and monitoring requirements

Alternative 3: make editorial changes to reflect changes to the Council Advisory panels and committees and modify the shrimp framework to allow adjustments to the following royal red shrimp accountability measures. Accountability measures that could be implemented or changed would include:

In-Season

- Closure procedures
- Trip limit reductions of increases

Post-Season

- Adjustment of season length
- Adjustment of trip or possession limits

*Note: The portions of the framework procedure regarding ACL, ACTs, and AMs currently apply only to royal red shrimp because penaeid shrimp species have annual lifecycles and, therefore, are not required to have these management measures.

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