

Tab B, No. 9(b)



FINAL DRAFT: Reef Fish Amendment 56

# **Modifications to the Gag Grouper Catch Limits, Sector Allocations, and Recreational Seasons**

# Background

**The most recent gag stock assessment (SEDAR 72 2022) estimated that gag is overfished and experiencing overfishing as of 2019**

- Assessment incorporated an ecosystem-based analysis accounting for red tide since 2005
- Updated information on sexual maturity and female to male transition (male proportion ~2%)
- Converts to new recreational landings estimates – impacts allocations and catch levels
  - FL SRFS estimates used for private recreational landings and discards
  - MRIP-FES and SRHS used for other landings estimates



# Background

## **The Council is obligated to end overfishing**

- Interim management measures are in place for 2023
- The Council's SSC recommended:
  - Reduced catch limits (OFL, ABC)
  - Revised criteria used to determine the stock status (MSY proxy)

## **Changes to the recreational data collection program must be addressed**

- Catch limits need to be updated to the new 'data currency' (SRFS and MRIP-FES)
- Allocations between commercial and recreational sectors can be reconsidered to align them with new estimates of recreational harvest



# Purpose and Need

**Purpose:** to modify the status determination criteria, optimum yield, catch limits, accountability measures, sector allocations, and the recreational fishing season and establish a rebuilding timeline for Gulf gag.

**Need:** to use the best scientific information available to end overfishing of Gulf gag and rebuild the stock to a level commensurate with maximum sustainable yield, consistent with the authority under the Magnuson-Stevens Act.



# Action 1: Modification of Gulf Gag

## SDC: Definitions

- SDC = Status determination criteria
- MSY = Maximum sustainable yield
  - Peak yield without causing harm to stock
- MFMT = Maximum Fishing Mortality Threshold
  - Go over this = overfishing occurring
- MSST = Minimum stock size threshold
  - Go under this = stock is overfished
- OY = Optimum yield
  - Long-term management goal, accounting for social and economic considerations



# Action 1: Gag Status Determination Criteria

**Alternative 1:** No Action. Retain the current SDC for gag.

- MSY = yield when fishing at the maximum yield per recruit ( $F_{MAX}$ )
- MFMT =  $F_{MAX}$
- MSST = 50% of the biomass at  $F_{MAX}$
- OY = 75% of the yield at  $F_{MAX}$

**Preferred Alternative 2:** Revise the SDC for gag based on the results of the updated 2022 SEDAR 72 stock assessment.

- MSY = yield when fishing at a 40% spawning potential ratio (SPR) or  $F_{40\%SPR}$
- MFMT =  $F_{MSY}$  or proxy
- MSST = 50% of the biomass at  $F_{MSY}$  or proxy
- OY = Conditional on the rebuilding plan. If the stock is under a rebuilding plan, OY is equal to the ACL; if the stock is not under a rebuilding plan, OY is equal to 90% of MSY or its proxy.

## Action 2: Gag Catch Limits, Sector Allocation and Rebuilding Timeline

- Under all potential rebuilding timelines, catch limit recommendations are a large reduction from current catch levels
- The Council has to select ACLs that are below the new ABC
- Current allocations set using the old MRIP-CHTS currency (average landings from 1986-2005)
- Catch limits must be updated so that they are in the same units used in the assessment (MRIP-FES and SRFS)

## Action 2: Gag Catch Limits, Sector Allocations and Rebuilding Timeline

**Alternative 1: No Action.** Retain the current catch limits and sector allocation of 61% recreational, 39% commercial for gag.

The current OFL, ABC, and ACLs are based on the MSY proxy  $F_{MAX}$  and were derived, in part, using the MRIP-CHTS data. These catch limits are in pounds (lb) gutted weight (gw). The recreational ACL is in MRIP-CHTS units:

OFL	4,180,000
ABC	3,120,000
Stock ACL	3,120,000
Commercial ACL (39% of Stock ACL)	1,217,000
Recreational ACL (61% of Stock ACL)	1,903,000

*Note: This is not a legally viable alternative because it is not based on the best scientific information available, and it would retain catch levels that are above those produced by SEDAR 72 and recommended by the SSC.*



## Action 2: Gag Catch Limits, Sector Allocations and Rebuilding Timeline

**Alternative 2:** Revise the catch limits for gag and establish a rebuilding time for the gag stock. The OFL, ABC, and ACLs are based on an  $F_{MSY}$  proxy of the yield when fishing at  $F_{40\%SPR}$ . The ABC is equal to the stock ACL, which equals the combined total ACLs from both sectors.

Retain the current sector allocation percentages of 61% recreational, 39% commercial.

The recreational ACL is informed by SRFS for private recreational vessels, by MRIP-FES data for the for-hire and shore modes, and by the Southeast Region Headboat Survey for headboats.

# Alternative 2: $F_{40\%SPR}$ , 61% rec, 39% comm

**Option 2a:** The minimum time to rebuild ( $T_{Min}$ ) in the absence of direct fishing pressure ( $F = 0$ ), equal to 11 years. The catch limits in this option do not include dead discards.

$F = F_{40\%SPR}$	OFL	ABC	Rec ACL	Com ACL
Year	mp gw	mp gw	mp gw	mp gw
2024	0.603	0	0	0
2025	0.821	0	0	0
2026	1.009	0	0	0
2027	1.222	0	0	0
2028	1.48	0	0	0

**Option 2b:** 75% of  $F_{40\%SPR}$  (18 years)

$F = F_{40\%SPR}$	OFL	ABC	Rec ACL	Com ACL
Year	mp gw	mp gw	mp gw	mp gw
2024	0.60	0.45	0.293	0.158
2025	0.82	0.63	0.410	0.221
2026	1.01	0.78	0.507	0.273
2027	1.22	0.96	0.624	0.336
2028	1.48	1.18	0.767	0.413



# Alternative 2: $F_{40\%SPR}$ , 61% rec, 39% comm

Option 2c:  $T_{Min} * 2$  (22 years)

$F = F_{40\%SPR}$	OFL	ABC	Rec ACL	Com ACL
Year	mp gw	mp gw	mp gw	mp gw
2024	0.60	0.55	0.358	0.193
2025	0.82	0.75	0.488	0.263
2026	1.01	0.93	0.605	0.326
2027	1.22	1.13	0.735	0.396
2028	1.48	1.37	0.891	0.480



## Action 2: Modification of Gulf Gag Catch Limits Sector Allocation, and Rebuilding Timeline

**Preferred Alternative 3:** Revise the catch limits for gag and establish a rebuilding time. The OFL, ABC, and ACLs are based on the  $F_{MSY}$  proxy of the yield when fishing at  $F_{40\%SPR}$ . The ABC is equal to the stock ACL, which equals the combined total ACLs from both sectors.

Revise the sector allocation to 65% recreational, 35% commercial, using average landings from 1986 – 2005, but using SRFS recreational landings data for the private recreational vessel fleet, by MRIP-FES data for the for-hire and shore modes, and by the Southeast Region Headboat Survey for headboats. The recreational ACL is also informed in the same manner. Each option below modifies the rebuilding timeline.

# Alternative 3: $F_{40\%SPR}$ , 65% rec, 35% comm

**Option 3a:** The minimum time to rebuild ( $T_{Min}$ ) in the absence of direct fishing pressure ( $F = 0$ ) is equal to 11 years. The catch limits in this option do not include dead discards.

$F = F_{40\%SPR}$	OFL	ABC	Rec ACL	Com ACL
Year	mp gw	mp gw	mp gw	mp gw
2024	0.591	0	0	0
2025	0.805	0	0	0
2026	0.991	0	0	0
2027	1.200	0	0	0
2028	1.454	0	0	0

**Preferred Option 3b:** 75% of  $F_{40\%SPR}$  (18 years)

$F = F_{40\%SPR}$	OFL	ABC	Rec ACL	Com ACL
Year	mp gw	mp gw	mp gw	mp gw
2024	0.591	0.444	0.288	0.155
2025	0.805	0.615	0.400	0.215
2026	0.991	0.769	0.500	0.269
2027	1.200	0.943	0.613	0.330
2028	1.454	1.156	0.751	0.405



# Alternative 3: $F_{40\%SPR}$ , 65% rec, 35% comm

Option 3c:  $T_{Min} * 2$  (22 years)

$F = F_{40\%SPR}$	OFL	ABC	Rec ACL	Com ACL
Year	mp gw	mp gw	mp gw	mp gw
2024	0.591	0.537	0.349	0.188
2025	0.805	0.736	0.479	0.258
2026	0.991	0.911	0.592	0.319
2027	1.200	1.109	0.721	0.388
2028	1.454	1.349	0.877	0.472



## Action 3: Modify the Gulf Gag Sector ACTs

ACTs are set lower than the ACL to account for management uncertainty. They reduce the likelihood that the ACL is exceeded and accountability measures are triggered.

- Gag is managed using ACTs for both sectors.
- Use of ACTs is discretionary but common for overfished stocks.
- The ACTs set in this action are dependent upon the ACLs chosen in Action 2.



# Action 3.1 Recreational ACT

- The recreational sector's ACT is currently set at 10.25% below the ACL.
- ACTs account for uncertainty associated with setting fishing season projections, which becomes increasingly difficult as season durations shorten.





# Action 3.1 Recreational ACT

- **Alternative 1: No Action.** Retain the current buffer between the recreational ACL and ACT. The recreational ACT is set equal to the yield at 75% of  $F_{MAX}$ . This resulted in the recreational ACT being set at 89.75% of the recreational ACL.

*Note: This is not a legally viable alternative because using  $F_{Max}$  to calculate the buffer is no longer considered to be consistent with the best scientific information available.*

- **Alternative 2:** Set the recreational ACT 10% below the recreational ACL. This value is calculated using the Council's ACL/ACT Control Rule, based on the 2018 – 2021 recreational fishing years, using MRIP-CHTS data units. MRIP-CHTS data units are used to ensure landings are directly comparable in fishing years that had catch limits defined in MRIP-CHTS.
- **Preferred Alternative 3:** Set the recreational ACT 20% below the recreational ACL.

## Action 3.2 Commercial ACT

- The commercial ACT is set at 8.85% below the commercial ACL. This value was set using the yield at 75% of the fishing mortality associated with  $F_{Max}$ .
- Additionally, a commercial quota is set 14% below the commercial ACT. This results in a commercial quota that is set about 21.6% below the commercial ACL.
  - Originally from the beginning of the IFQ program due to uncertainty about commercial discards
  - Commercial discards much lower now, and commercial landings and discards explicitly included in the stock assessment



# Action 3.2 Commercial ACT

- **Alternative 1: No Action.** Retain the current buffer between the commercial ACL and ACT. The commercial ACL is equal to 39% of the ABC. The commercial ACT is set equal to the yield at 75% of  $F_{MAX}$ , which results in a commercial ACT that is 8.85% below the commercial ACL. The commercial quota is set at 86% of the commercial ACT. This results in a commercial quota that is approximately 78% of the commercial ACL.

*Note: This is not a legally viable alternative because using  $F_{MAX}$  to calculate the buffer is no longer considered the best scientific information available.*

- **Alternative 2:** Set the commercial quota for the gag IFQ program equal to the commercial ACT. The commercial ACT will be fixed at 86% of the commercial ACL.
- **Preferred Alternative 3:** Set the commercial quota for the gag IFQ program equal to the commercial ACT. The commercial ACT will be fixed at 95% of the commercial ACL.

# Action 3: Modify the Gulf Gag Sector ACTs using Catch Limits and Sector Allocation in Action 2

			Action 3 Alternatives					
			Sub-Action 3.1			Sub-Action 3.2		
			Alternative 2		Preferred Alternative 3	Alternative 2		Preferred Alternative 3
Year	Action 2 Alternatives	Action 2 Options	Rec ACL	Rec ACT	Rec ACT	Com ACL	Com ACT/	Com ACT/
							Quota	Quota
2024	Alternative 2	Option 2a	0	0	0	0	0	0
		Option 2b	0.276	0.248	0.220	0.176	0.151	0.167
		Option 2c	0.333	0.299	0.266	0.213	0.183	0.202
	Alternative 3	Option 3a	0	0	0	0	0	0
		<b>Option 3b</b>	0.288	0.259	<b>0.230</b>	0.155	0.133	<b>0.147</b>
		Option 3c	0.349	0.314	0.279	0.188	0.161	0.178



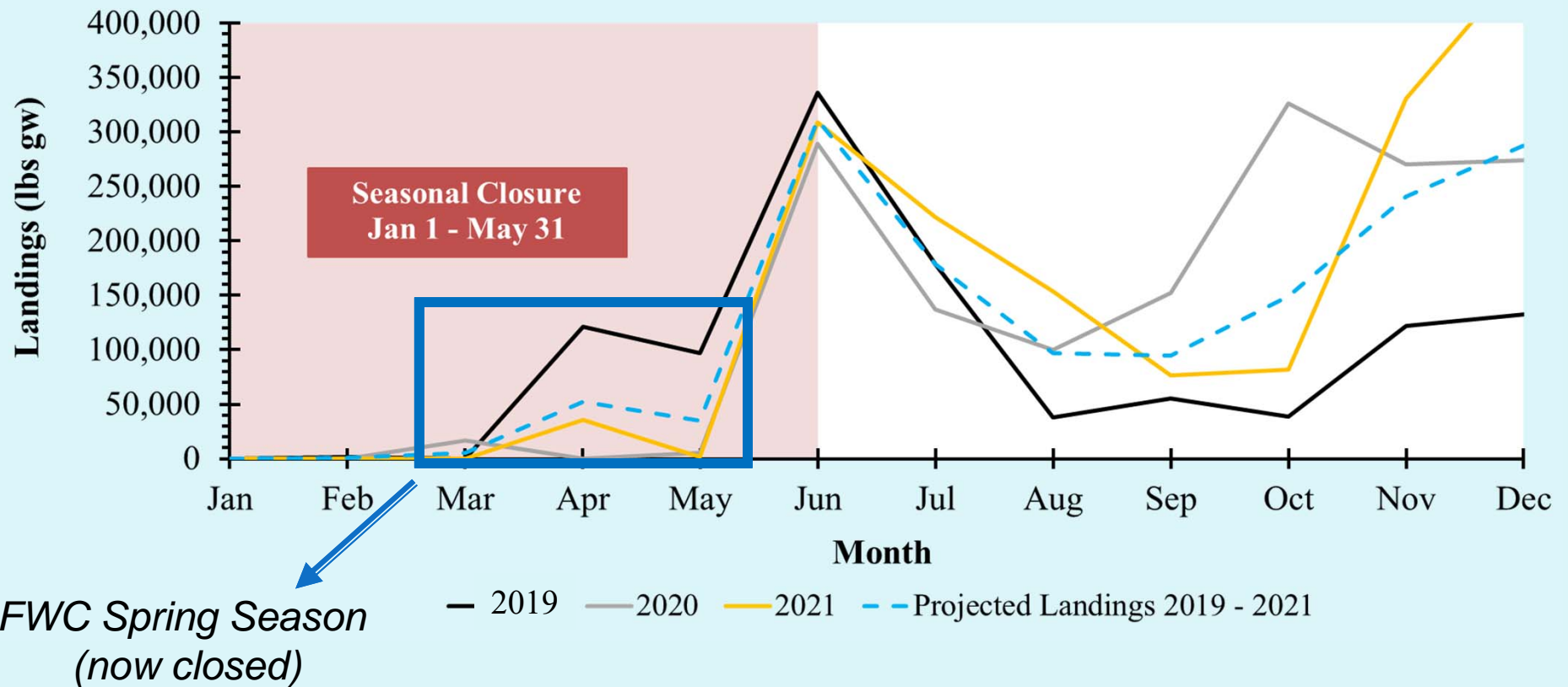
## Action 4: Modification of Gulf Gag Recreational Fishing Season Start Date and AMs

Since recreational catch limits are being reduced, the fishing season will be shortened to ensure the ACL isn't exceeded.

The Council is considering shifting the recreational season start date to balance the number of days the season will be open with the need to reduce the overall mortality of gag, and specifically fishing mortality on male gag.



# Action 4: Modification of Gulf Gag Recreational Fishing Season Start Date and AMs

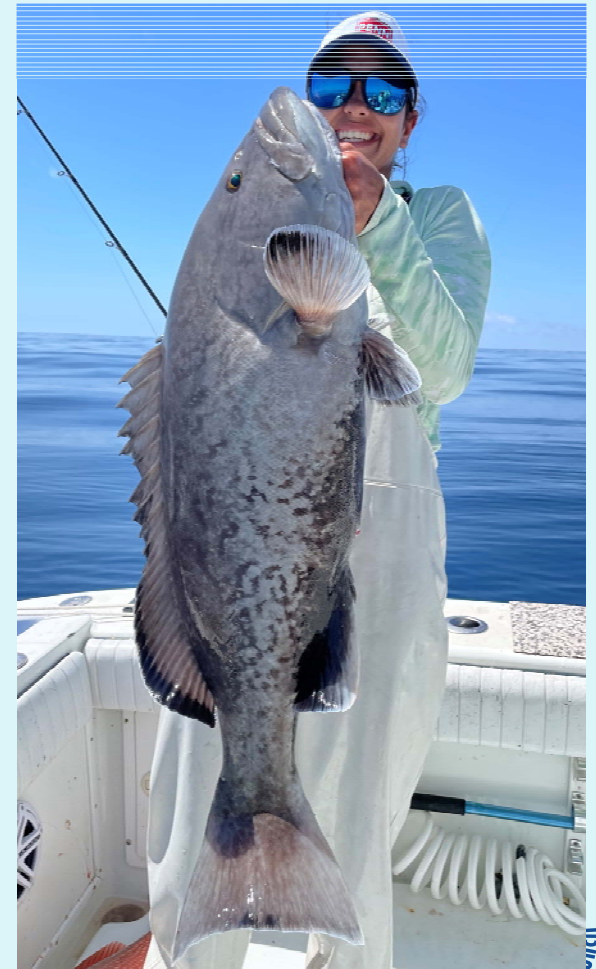


Monthly landings divided by # days / month to provide a daily catch rate to project expected closure dates



## Action 4: Modification of Gulf Gag Recreational Fishing Season Start Date... and AMs

- **Alternative 1: No Action.** Retain the current June 1 recreational fishing season opening for gag and the requirement that NMFS prohibit harvest when the recreational ACL is projected to be met...
- **Alternative 2:** Open rec fishing season on June 1. NMFS closes harvest when the ACT is projected to be met...
- **Preferred Alternative 3:** Open rec fishing season on September 1. NMFS closes harvest when the ACT is projected to be met...
- **Alternative 4:** Open rec fishing season on October 1. NMFS closes harvest when the ACT is projected to be met...



## Action 4: The Accountability Measures...

- **Alternative 1:** No Action... if recreational landings exceed the recreational ACL, NMFS will maintain the recreational ACT for the following fishing year at the level of the prior year's ACT, unless the best scientific information available determines that maintaining the prior year's ACT is unnecessary. If gag is overfished, a lb for lb payback is applied to the ACL and ACT.
- **Alternatives 2-4:** Modify the AMs to direct that NMFS prohibit harvest when the recreational ACT is projected to be met. In addition, remove the provision that requires NMFS to maintain the prior year's ACT if the ACL is exceeded in the previous year. If gag is overfished, a lb for lb payback is applied to the ACL and ACT.





## Action 4: Expected Season Duration based on Action 2

### Action 2, Alternative 2: 39% commercial | 61% recreational

Action 2 Alts	Rec ACL (lb gw)	Act 4, Alt 1 Open: June 1	Rec ACT (lb gw)	Act 4, Alt 2 Open: June 1	Act 4, Alt 3 Open: Sept 1	Act 4, Alt 4 Open: Oct 1
Alt 2b: 18y	276,000	<b>June 27</b> (27 days)	248,000	<b>June 24</b> (24 days)	<b>Nov 1</b> (62 days)	<b>Nov 13</b> (44 days)
Alt 2c: 22y	333,000	<b>July 4</b> (34 days)	300,000	<b>June 29</b> (29 days)	<b>Nov 7</b> (68 days)	<b>Nov 19</b> (50 days)

Shown for 2024 only; see document for full table



# Action 4: Expected Season Duration based on Action 2

## Action 2, Alternative 3: 35% commercial | 65% recreational

Action 2 Alts	Rec ACL (lb gw)	Act 4, Alt 1 Open: June 1	Rec ACT (lb gw)	Act 4, Alt 2 Open: June 1	Act 4, Pref Alt 3 Open: Sept 1	Act 4, Alt 4 Open: Oct 1
<b>Preferred Alt 3b: 18y</b>	288,000	<b>June 28</b> (28 days)	259,000	<b>June 25</b> (25 days)	<b>Nov 2</b> (63 days)	<b>Nov 14</b> (45 days)
Alt 3c: 22y	349,000	<b>July 7</b> (37 days)	314,000	<b>July 1</b> (31 days)	<b>Nov 9</b> (70 days)	<b>Nov 21</b> (52 days)

Shown for 2024 only; see document for full table

