



Tab B, No. 4(a)

Options:
**Modifications to Gag and Black Grouper
Recreational Retention Limits, Spatial Areas, and
Commercial Management Measures**



Regulatory Status

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

- Amendment 56 establishes a rebuilding plan for gag:
 - Revises SDC, and sets F_{MSY} proxy at $F_{40\%SPR}$; sets OY at ACL when overfished, and at 90% of MSY when not overfished
 - Sets 18-year rebuilding plan, and revises sector allocation to 65% recreational and 35% commercial
 - Sets recreational ACT at 80% of recreational ACL
 - Sets commercial ACT at 95% of commercial ACL, and sets commercial quota equal to commercial ACT
 - Sets recreational fishing season to begin September 1 and close when the recreational ACT is projected to be met



Council Motion

RF56 was transmitted to NMFS on June 27, 2023

- Rulemaking expected to take at least 6 months

Council expressed interest in additional measures for gag and also included black grouper:

- *Motion: To direct staff to develop the following options for exploration in a framework action or amendment:*
 - *Lowering the gag and black grouper recreational bag limit*
 - *Establishing a gag and black grouper recreational vessel limit*
 - *Spatial areas to protect spawning gag*
- *Motion carried 12 to 3 with 2 abstentions.*
- Black grouper included due to misidentification concerns with gag



Considerations...

- Black Grouper
 - Does the Council want to move forward with black grouper management measures in this document, at this time?
 - Currently working on Amendment 58 to modify SWG complex ACLs
 - Black grouper is in the SWG complex
 - Black grouper stock assessment (or other analysis) to start fall 2025; management advice available fall 2026...?
- Gag
 - Gag OA to start fall 2025 and be completed by mid- to late-2026
 - Gag IA could be requested while the OA is in progress
 - SEFSC advises being sensitive to species in rebuilding plans



September 2023 SSC Meeting – Gag Research Review

- Review of some recent literature and data available on gag grouper
 - Movement and habitat use
 - Reproductive behavior
 - Susceptibility to environmental factors
 - Discard mortality
- What are the Council's goals and objectives for gag?
- What are the Council's goals and objectives for black grouper?



Council Goals for Gag?

- Ideas based on previous Council comments that the SSC might consider in September:
 - Reduce discard mortality for both sectors?
 - Increase recreational fishing season duration?
 - Reduce fishing pressure during gag spawning season?
 - Reduce fishing mortality on male gag?



Possible Management Alternatives...

- Recreational Bag Limit Reduction
- Recreational Vessel Limit
- New Spatial Closure(s)
- Commercial Spawning Season Closure



Management Options: Recreational Bag Limit

- Current recreational bag limits:
 - Gag: 2 per person per day (pp/pd), within 4 grouper aggregate
 - Black Grouper: 4 pp/pd, within 4 grouper aggregate
- Halving the bag limit (e.g., 2 fish to 1 fish pp/pd) is not estimated to double the fishing season duration
 - Most fishermen don't catch the bag limit



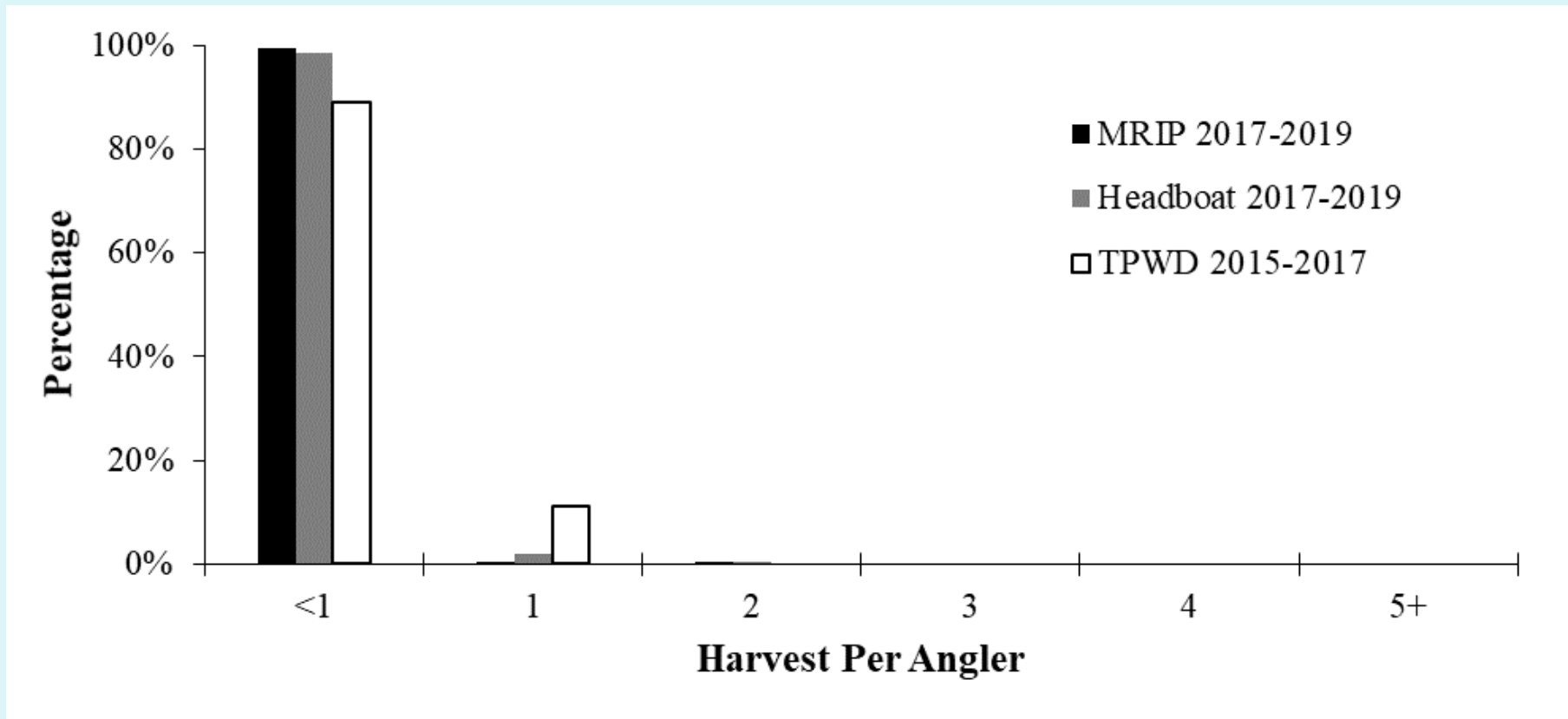
Management Options: Recreational Bag Limit

- Preliminary bag limit analysis for gag:
 - Done prior to RF56 development; can be updated with data used for SEDAR 72 (2022)
- Recent Gulf recreational catch-effort data
 - MRIP-CHTS, SRHS: 2017 – 2019
 - TPWD: 2015 – 2017
 - n = 3,471 trips that harvested gag
- **Reducing gag bag limits from 2 fish per person to 1 fish per person would functionally have no impact**
 - 99% of all trips sampled did not harvest over 1 gag per angler



Management Options: Recreational Bag Limit

- Mean harvest per angler:



- MRIP-CHTS (private + for-hire, n = 1,311 trips), SRHS (n = 2,151 trips) and TPWD (n = 9 trips).

Management Options: Recreational Bag Limit - Possibilities

- Reduce black grouper bag limit to match gag bag limit
- Pros:
 - If there is an issue with misidentification, this would reduce the probability of inadvertent harvest of gag
- Cons:
 - No stock assessment of black grouper validating a stock condition similar to gag, so a bag limit reduction may not be necessary for black grouper



Management Options: Recreational Bag Limit - Possibilities

- Reduce gag recreational bag limit to 1 fish per person per day
- Pros:
 - ...?
- Cons:
 - No appreciable reduction in F from lowering gag bag limit
 - Reduction in F may be negated by discard mortality, especially on vessels carrying multiple anglers
 - 50% bag limit reduction \neq doubling of recreational fishing season duration
 - Preliminary analysis indicates that decreasing the bag limit to 1 fish would have little to no effect on recreational fishing season duration



Management Options: Recreational Vessel Limit

- Vessel limit would allow for alternative to reducing individual bag limit
- Would require anglers to understand the difference between the individual bag limit and the vessel limit
- Would be defined as “per day”, allowing for the current multi-day trip limit for appropriately equipped for-hire vessels
- Headboat exemption?



Management Options: Recreational Vessel Limit

- Preliminary vessel limit analysis for gag
 - Done prior to RF56 development; can be updated with SRFS
- Recent Gulf recreational catch-effort data
 - Data: MRIP-CHTS (private + for-hire), SRHS, and TPWD = 3,471 trips that harvested gag
 - MRIP: ~50% of vessels reported harvesting more than one gag
 - SRHS: ~60% of headboats reported harvesting more than one gag
 - TPWD: ~10% of vessels in Texas harvested more than one gag
- Most trips (>80%) harvest 4 gag or less, except some headboats



Management Options: Recreational Vessel Limit - Possibilities

- Establish a combined vessel limit for gag and black grouper:
 - E.g., 2, 3, 4 fish per vessel per trip?
- Pros:
 - Doesn't matter if landed fish are gag or black grouper; easier for enforcement and anglers struggling with identification
- Cons:
 - More rapid harvest of gag, which are more abundant than black grouper in the Gulf;
 - Gag and black grouper have different spatial distributions
 - May result in a marked reduction in allowable retention for vessels with multiple anglers (e.g., larger private vessels, for-hire)



Management Options: Spatial Closures

- Current year-round spatial closures pertinent to gag:
 - Madison-Swanson (FL), Steamboat Lumps (FL)
- Current partial-year spatial closures:
 - The Edges (FL), 20-Fathom Break (FL)
- Gag occur from AL east and south into southwest FL
- Black grouper occur from west-central through southwest FL and the FL Keys
- Spatial overlap in southwest FL
- All areas far offshore; recreational enforcement is difficult



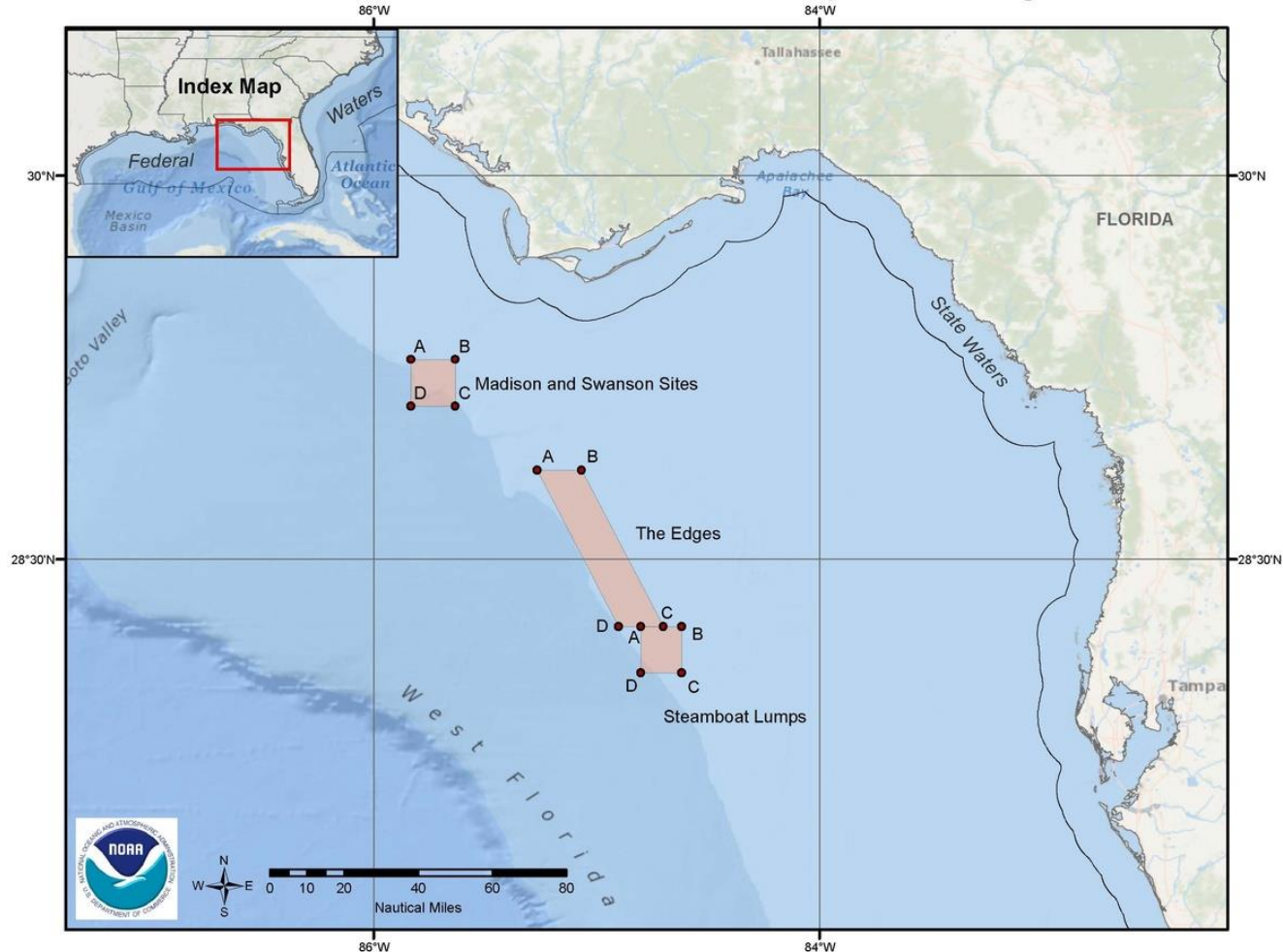
Management Options: Spatial Closures

- Could consider extending partial-year closure(s) to year-round
 - Being closed for part of the year functionally only delays potential fishing mortality
 - Fishermen can just fish that area when it isn't closed
- E.g., The Edges:
 - Partial closure in Amendment 30B
 - Closed Jan 1 – Apr 30
 - 390 nm² gag spawning region northwest of Steamboat Lumps
- 20-fathom break? Or deeper?



Management Options: Spatial Closures

Madison and Swanson Sites, Steamboat Lumps, and the Edges



Ocean Basemap from ArcGIS.com
Sources: GEBCO, NOAA, CHS, OSU, UNH, CSUMB, National Geographic, DeLorme, NAVTEQ, and Esri



Management Options: Spatial Closures - Possibilities

- Establish a new spatial area closure to protect spawning gag.
- Pros:
 - May reduce fishing mortality on gag spawning stock biomass
 - May alleviate fishing mortality on males and improve reproduction
 - May have tangential benefits for species on the same habitat as gag



Management Options: Spatial Closures - Possibilities

- Establish a new spatial area closure to protect spawning gag.
- Cons:
 - Determining efficacy can take many years
 - Determining efficacy is notoriously difficult to quantify
 - Many species on same habitat as gag, and many knowledge gaps still exist
 - Efficacy can be confounded by mortality associated with fishery-independent sampling and academic research
 - Take is take; doesn't really matter who's doing it
 - Year-round closure expected to be most effective
 - If only closed part of the year, or conditional on stock status, fishing pressure therein may increase when closure not in effect
 - Difficulty of recreational enforcement directly correlated to spatial area size and distance from shore/population centers
 - Possibility for considerable economic burden



Other Measures?...

- Commercial closure during the spawning season



Management Options: Commercial Spawning Season Closure

- Gag and black grouper managed under the Grouper-Tilefish IFQ program
 - Initial purpose included allowing commercial fishermen to fish when it was best for them to do so
 - Previous system of trip limits, seasons, and size limits was ineffective for fishermen, and increased regulatory discards
- Gag spawning peaks in February and March
- Black grouper spawning peaks from January – March

Management Options: Commercial Closed Season: Examples

- Commercial catch share programs with closed seasons:
- North Pacific Halibut
 - International Pacific Halibut Commission sets ACLs
 - Usually open mid-March 15 through mid-November
 - Safety at sea, catch monitoring and processing, bycatch
- North Pacific Crab
 - Seasons set by AK, open October 15, and close between April and May
 - Molting and mating, catch processing, markets
- AK Rockfish
 - Seasonal openings based on harvest gear used

Management Options: Commercial Closed Season

FMP category	Common name	Family	Scientific name	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Coastal Migratory Pelagics	King Mackerel	Scombridae	<i>Scomberomorus caeruleus</i>												
Coastal Migratory Pelagics	Spanish Mackerel	Scombridae	<i>Scomberomorus maculatus</i>												
Red Drum	Red Drum	Sciaenidae	<i>Sciaenops ocellatus</i>												
Reef Fish	Gray Triggerfish	Balistidae	<i>Trachurus capricornis</i>												
Reef Fish	Greater Snook	Lutjanidae	<i>Lutjanus merli</i>												
Reef Fish	Almaco Jack	Sparidae	<i>Amblyoblennius velox</i>												
Reef Fish	Speckled Hind	Epinephelidae	<i>Epinephelus drummondhayi</i>												
Reef Fish	Goliath Grouper	Epinephelidae	<i>Epinephelus itajara</i>												
Reef Fish	Red Grouper	Epinephelidae	<i>Epinephelus morio</i>												
Reef Fish	Nassau Grouper	Epinephelidae	<i>Epinephelus striatus</i>												
Reef Fish	Yellowedge Grouper	Epinephelidae	<i>Hyporthodus flavolimbatus</i>												
Reef Fish	Warsaw Grouper	Epinephelidae	<i>Hyporthodus nigritus</i>												
Reef Fish	Snowy Grouper	Epinephelidae	<i>Hyporthodus niveatus</i>												
Reef Fish	Black Grouper	Epinephelidae	<i>Mycteroperca bonaci</i>												
Reef Fish	Yellowmouth Grouper	Epinephelidae	<i>Mycteroperca interstitialis</i>												
Reef Fish	Gag Grouper	Epinephelidae	<i>Mycteroperca microlepis</i>												
Reef Fish	Scamp	Epinephelidae	<i>Mycteroperca phenax</i>												
Reef Fish	Yellowfin Grouper	Epinephelidae	<i>Mycteroperca venenosa</i>												
Reef Fish	Hogfish	Labridae	<i>Lachnolaimus maximus</i>												
Reef Fish	Mutton Snapper	Lutjanidae	<i>Lutjanus analis</i>												
Reef Fish	Red Snapper	Lutjanidae	<i>Lutjanus campechanus</i>												
Reef Fish	Cubera Snapper	Lutjanidae	<i>Lutjanus cyanopterus</i>												
Reef Fish	Vermilion Snapper	Lutjanidae	<i>Rhomboplites aurorubens</i>												
Reef Fish	Tilefish	Malacanthidae	<i>Lopholatilus chamaeleonticeps</i>												
Not Federally Managed	Southern Flounder	Paralichthyidae	<i>Paralichthys lethostigma</i>												
Not Federally Managed	Spotted Seatrout	Sciaenidae	<i>Cynoscion nebulosus</i>												
Not Federally Managed	Black Drum	Sciaenidae	<i>Pogonias cromis</i>												
Not Federally Managed	Sheepshead	Sparidae	<i>Archosargus probatocephalus</i>												
Number species (all)				11	13	13	19	19	20	16	18	15	9	7	5
Number species (peak)				3	5	10	9	8	8	8	7	4	2	1	3
				Q1			Q2			Q3			Q4		

Spawning months

Stallings et al. 2023

Management Options: Commercial Closed Season - Possibilities

- Establish a commercial fishing season closure for gag and black grouper
 - January through April? February through March?
- Pros:
 - Would alleviate direct fishing pressure during spawning activity
- Cons:
 - Could increase regulatory discards during spawning closure
 - Evidence of commercial vertical line fleet ability to redirect effort in 2023
 - Would impact markets re: availability of gag and black grouper
 - Would require future action to change
 - Positive effect of spawning closures on SSB questionable for many species, and has not been demonstrated yet for gag



Management Options: Commercial Closed Season - Possibilities

- Commercial fishing season closure tied to stock status:
 - If gag or black grouper is in a rebuilding plan, the commercial fishing season will be closed from:
 - February 1 – March 31
 - January 1 – April 30
 - If gag or black grouper is not in a rebuilding plan, then the commercial fishing season closure does not apply.
 - Include red grouper (bycatch likely)?
- Pros:
 - Would alleviate fishing pressure during spawning activity
 - Measure effective after stock status determined as overfished
 - Automatically removed once stock is no longer overfished



Management Options: Commercial Closed Season - Possibilities

- Gag commercial fishing season closure tied to stock status
 - If gag or black grouper is in a rebuilding plan, the commercial fishing season will be closed from:
 - February 1 – March 31
 - January 1 – April 30
 - If gag or black grouper is not in a rebuilding plan, then the commercial fishing season closure does not apply.
- Cons:
 - Could increase regulatory discards during spawning closure
 - Evidence of commercial vertical line fleet ability to redirect effort in 2023
 - Would impact markets re: availability of gag and black grouper
 - Conflicts with SAFMC seasons?
 - Could be in effect for some time



Decision Matrix

Goals	Recreational Bag Limit	Recreational Vessel Limit	Spatial Closure	Commercial Spawning Season Closure
Decrease Discards	X	?	X	√
Increase Recreational Season Duration	X	√	X	N/A
Decrease Fishing Mortality During Spawning Season	N/A	N/A	X	√
Decrease Fishing Mortality on Males	X	?	?	√

Questions?

