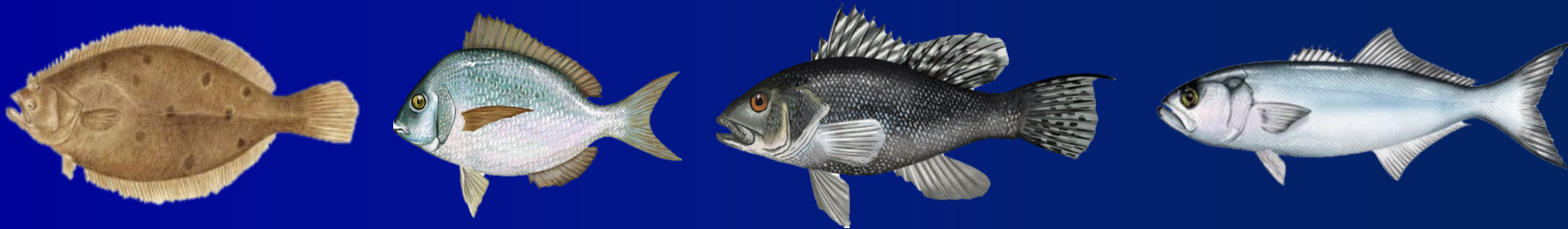




# Recreational Harvest Control Rule



Joint Council and ASMFC Policy Board Meeting  
August 10, 2021

# Presentation Outline

- Goal of Harvest Control Rule
- FMAT/PDT recommendations for draft alternatives
  - 1) No action alternative
  - 2) Percent change alternative
  - 3) Fishery score alternative
  - 4) Biological reference point alternative
  - 5) Biomass based matrix alternative
- Next steps
- Discussion: Provide feedback and guidance on further development of alternatives



# Goal of Harvest Control Rule

- Rely less on MRIP vs. RHL or ACL.
- Use a more holistic approach with greater emphasis on stock status indicators and trends.
- Pre-determined mgmt. responses to a suite of metrics.
  - Details vary by alternative.



# Under All Alternatives:

- Changes are only considered to how the rec. bag/size/season are set, and potential changes to AMs.
- No changes to how ACLs are set.
- No changes to commercial fishery mgmt.
- MRIP will continue to be the primary data source for rec. catch, harvest, discards, effort, and fishing mortality.
  - May not be the main driver in determining bag/size/season, depending on the alternative.
- Methods to account for variability and uncertainty in MRIP data can be considered.

# Alt 1: No action

- Represents the current process.
- MRIP data from one or more recent years used to predict the impacts of status quo or changes in bag/size/season limits.
- Aim to prevent RHL overages, and therefore ACL and ABC overages.
- Process does not vary based on stock status.
- Generally does not account for expected differences in availability or other factors in upcoming year.

# Alt 2: Percent Change Alternative

- Maintains MRIP vs. RHL comparison.
  - RHL within, above, or below confidence interval (CI) of MRIP estimate?
- Includes explicit consideration of  $B/B_{MSY}$  when determining if measures should be liberalized, restricted, or remain unchanged.
  - Below target, above target but less than 150% of target, or more than 150% of target?
- Amount of change (if any) varies based on magnitude of difference between MRIP and RHL, as well as  $B/B_{MSY}$  ratio.

# Alt 2: Percent Change Alternative

- One of two approaches used to determine mgmt. measures.
- Binned approach – no change, or a, b, or c% liberalization/reduction.
- Coefficient approach - % difference between RHL and MRIP multiplied by d or e scalar. Response is proportional to difference between RHL and MRIP.

## Binned approach:

Future RHL vs MRIP Estimate	B/B <sub>MSY</sub>	Change in Measures
Future RHL more than X% higher than MRIP estimate (and outside CI)	> 1.5	c% Liberalization
	1 - 1.5	b% Liberalization
	< 1	Status quo
Future RHL up to X% higher than MRIP estimate (and outside CI)	> 1.5	b% Liberalization
	1-1.5	a% Liberalization
	< 1	Status quo
Future RHL within CI of MRIP estimate	> 1.5	a% Liberalization
	1-1.5	Status quo
	< 1	a% Reduction
Future RHL up to X% lower than MRIP estimate (and outside CI)	> 1.5	Status quo
	1-1.5	a% Reduction
	< 1	b% Reduction
Future RHL more than X% lower than MRIP estimate (and outside CI)	> 1.5	Status quo
	1-1.5	b% Reduction
	< 1	c% Reduction

## Coefficient approach:

Future RHL vs MRIP Estimate	B/B <sub>MSY</sub>	Change in Measures
RHL above CI of MRIP estimate	> 1.5	$\Delta*d\%$ Liberalization
	1 - 1.5	$\Delta*e\%$ Liberalization
	< 1	Status quo
RHL within CI of MRIP estimate	> 1.5	$\Delta*e\%$ Liberalization
	1-1.5	Status quo
	< 1	$\Delta*e\%$ Reduction
RHL below CI of MRIP estimate	> 1.5	Status quo
	1-1.5	$\Delta*e\%$ Reduction
	< 1	$\Delta*d\%$ Reduction

$\Delta$  = difference between RHL and MRIP estimate.

# Alt 3: Fishery Score Alternative

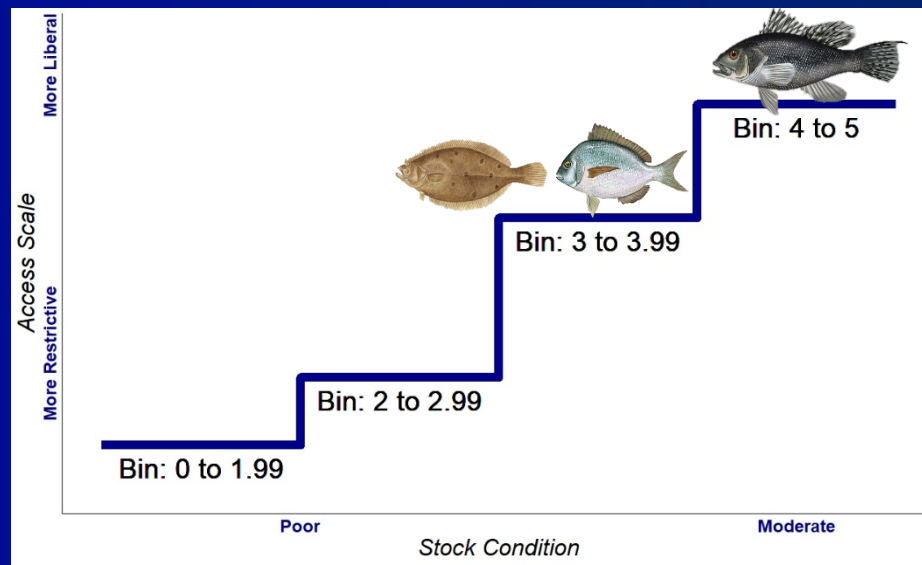
- Combine multiple metrics into one fishery score
  - Fishing mortality relative to the threshold level ( $F_{MSY}$ )
  - Biomass relative to the target ( $B_{MSY}$ )
  - Recruitment trends
  - Comparison of average harvest to the RHL
- Each metric is weighted according to the relationship it has to harvest
- Provides one, easy to interpret value that encompasses multiple aspects of the fishery



# Alt 3: Fishery Score Alternative

$$F/F_{MSY}(W_F) + B/B_{MSY}(W_B) + R \text{ Trend}(W_R) + \text{Fishery performance } (W_{FP}) = \text{Fishery Score}$$

Fishery Score	Level of Concern	Stock Status and Fishery Performance Outlook	Measures
0-1.99	Highest Risk	Very Poor	Most Restrictive
2-2.99	High Risk	Poor	Restrictive
3-3.99	Medium Risk	Moderate	Liberal
4-5	Low Risk	Good	Most Liberal






# Alt 4: Biological Reference Point Alternative

- Primary metrics are the  $B/B_{MSY}$  and  $F/F_{MSY}$  from the terminal year of the most recent stock assessment
- $F$  is based on two states, above or below the target
- $B/B_{MSY}$  is defined as one of four states
  - Biomass is greater than or equal to 1.5x the target.
  - Biomass is greater than or equal to the target but less than 1.5x the target.
  - Biomass is less than the target, but greater than or equal to the threshold (the threshold is  $\frac{1}{2}$  the target).
  - Biomass is less than the threshold (the stock is overfished).

# Alt 4: Biological Reference Point Alternative

- Secondary metrics:
  - Trends in biomass and recruitment
  - Comparison to the RHL (fishery performance)
- Only evaluated when stock conditions remain unchanged between prior and most recent stock assessment
- Can be used to further relax, restrict, or re-evaluate measures

# Alt 4: Biological Reference Point Alternative

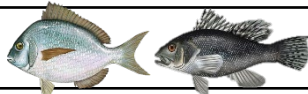


	$F \leq F_{msy}$	$F > F_{msy}$																									
$150\%B_{target} \leq B$	 <table border="1"> <thead> <tr> <th></th> <th>R↑</th> <th>R↓</th> </tr> </thead> <tbody> <tr> <td>B↑</td> <td>relax</td> <td>relax</td> </tr> <tr> <td>B↓</td> <td>default</td> <td>default</td> </tr> </tbody> </table> <p style="text-align: center;"><b>1</b></p>		R↑	R↓	B↑	relax	relax	B↓	default	default	<table border="1"> <thead> <tr> <th></th> <th></th> <th>R↑</th> <th>R↓</th> </tr> </thead> <tbody> <tr> <td rowspan="2">PERF ≤ RHL/ACL</td> <td>B↑</td> <td>default?</td> <td>restrict</td> </tr> <tr> <td>B↓</td> <td>restrict</td> <td>restrict</td> </tr> <tr> <td rowspan="2">PERF &gt; RHL/ACL</td> <td>B↑</td> <td colspan="2" rowspan="2">restrict and re-eval measures</td> </tr> <tr> <td>B↓</td> </tr> </tbody> </table> <p style="text-align: right;"><b>4</b></p>			R↑	R↓	PERF ≤ RHL/ACL	B↑	default?	restrict	B↓	restrict	restrict	PERF > RHL/ACL	B↑	restrict and re-eval measures		B↓
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$B < B_{threshold}$	<b>REBUILDING PLAN</b>																										
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# Alt 5: Biomass Based Matrix Alternative

- Uses a matrix to set recreational measures based on two factors:  $B/B_{MSY}$  and the most recent trend in biomass (increasing, stable, or decreasing)
  - Step A represents optimal conditions while Step F is the worst conditions
- A 3x4 matrix will be used to determine appropriate management measure step

# Alt 5: Biomass Based Matrix Alternative

- Abundant = Stock is at least 150% of the target level ( $B_{MSY}$ )
  - Healthy = Stock is above the target, but less than 150% of the target
  - Below Target = Stock is below target, but above threshold ( $\frac{1}{2} B_{MSY}$ )
  - Overfished = The stock is below threshold
- Biomass trend – see Appendix B for example method

		Biomass Trend		
		Increasing	Stable	Decreasing
Stock Status	Abundant	Step A		
	Healthy	Step A	Step B	
	Below Target	Step C		Step D
	Overfished	Step E		Step F

# Accountability Measures

- **Proactive AMs built into all alternatives.**
  - Set measures to prevent RHL overages (alt. 1).
  - Greater chance of restrictions/less chance for liberalizations when stock status is poor (alt. 2).
  - Movement to a more or less restrictive “bin” based on stock status and/or fishery performance (alt. 3 - 5).
- **Reactive AMs require further consideration.**
  - Maintain catch to ACL comparison in current AMs?
  - Consider other fishery performance metrics such as  $F$  vs  $F_{MSY}$ ?

# Milestones

- Further development of alternatives (Aug-Oct)
- SSC sub-group peer review of two models (September 20)
- Workgroups to solicit stakeholder input on management scenarios (Fall)
- Policy Board/Council review and approve final range of alternatives and draft addendum for public comment (October)
- Public Hearings (Nov-Dec)
- FMAT/PDT, MC, and APs meet to consider recommendations for final action (January 2022)
- Board/Council consider final action on FW/addendum (February 2022)
- MC, Board, Council set 2022 recreational management measures (Spring 2022)
- Development of NEPA document for framework and federal rulemaking (mid to late 2022)





# Next Steps

- FW/addendum would define a process for setting recreational management measures
  - Will not prescribe specific management measures
- Guidance from Council and Policy Board on direction of alternatives presented.



# Questions/Discussion

Objective: Provide feedback and guidance to FMAT/PDT on alternatives presented today.

