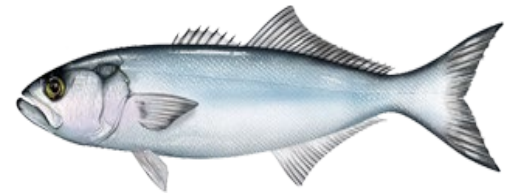
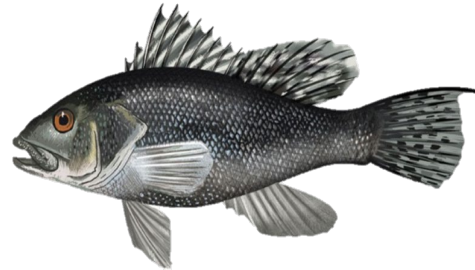
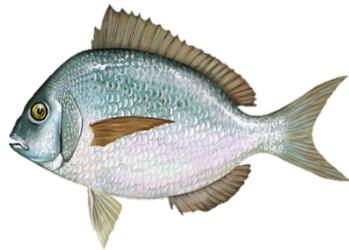
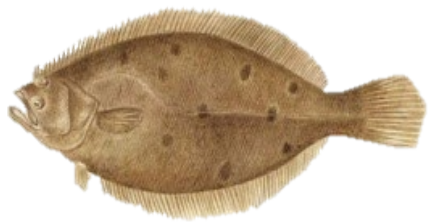


# Harvest Control Rule 2.0 Framework/Addenda



Council and Policy Board Meeting  
August 9, 2023

- Brief overview of Harvest Control Rule 1.0 and Council/Policy Board tasking for 2.0.
- Summary of FMAT/PDT meetings.
- Discuss role of SSC.
- Consider use of summer flounder MSE model.
- Discuss role of new Commissioner/Council member work group and appoint Council members to the group.
- Timeline for next steps.

“Move to further develop

Alt. B (Pct Change Approach),

Alt. D (Biological Reference Point Approach) and

Alt. E (Biomass Based Matrix Approach)

for implementation no later than the beginning of the 2026 fishing year.

Further development should consider, at minimum,

F-based approaches for Alt. B and

development of measures using modeling or

other approaches for Alts. D and E.

Further evaluate the issue of “borrowing” as raised by the SSC for alt B, D, and E.”

## Goal statement:

Establish a process for setting recreational measures that:

- prevents overfishing,
- is reflective of stock status,
- appropriately accounts for uncertainty in the recreational data,
- takes into consideration angler preferences, and
- provides an appropriate level of stability and predictability in changes from year to year.

## **Statement of the problem:**

The previous recreational measures setting process faced several challenges:

- Concerns related to uncertainty and variability in the recreational fishery data
- Need to change measures (sometimes annually) based on those data
- Perception that measures are not reflective of current stock status
- Management measures have not always had their intended effect on overall harvest.

## As approved and implemented:

RHL vs Harvest Estimate	B/B <sub>MSY</sub>	Change in Harvest
Future 2-year avg RHL > upper bound of harvest estimate CI (harvest expected to be lower than RHL)	Very high ( $\geq 150\%$ )	Liberalization % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 40%</u>
	High (100 – 150%)	Liberalization % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 20%</u>
	Low ( $< 100\%$ )	10% liberalization
Future 2-year avg RHL within harvest estimate CI (harvest expected to be close to RHL)	Very high ( $\geq 150\%$ )	10% liberalization
	High (100 – 150%)	No change
	Low ( $< 100\%$ )	10% reduction
Future 2-year avg RHL < lower bound of harvest estimate CI (harvest expected to exceed RHL)	Very high ( $\geq 150\%$ )	10% reduction
	High (100 – 150%)	Reduction % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 20%</u>
	Low ( $< 100\%$ )	Reduction % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 40%</u>

## Also considered (not implemented) – Sub-Alt. 1B-1A in FW:

RHL vs Harvest Estimate	$B/B_{MSY}$	Change in Harvest
Future 2-year avg RHL > upper bound of harvest estimate CI (harvest expected to be lower than RHL)	Very high ( $\geq 150\%$ )	Liberalization % = difference between harvest estimate and 2-yr avg RHL, <del>not to exceed 40%</del>
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	Low ( $< 100\%$ )	Reduction % = difference between harvest estimate and 2-yr avg RHL, <del>not to exceed 40%</del>

FMAT/PDT seeks guidance on if this should be further considered.

## Also considered (not implemented) – Sub-Alt. 1B-1B in FW:

RHL vs Harvest Estimate	B/B <sub>MSY</sub>	Change in Harvest
Future 2-year avg RHL > upper bound of harvest estimate CI (harvest expected to be lower than RHL)	Very high (>= 150%)	Liberalization % = <del>difference between harvest estimate and 2-yr avg RHL, not to exceed 40%</del>
	High (100 – 150%)	Liberalization % = <del>difference between harvest estimate and 2-yr avg RHL, not to exceed 20%</del>
	Low (< 100%)	10% liberalization
Future 2-year avg RHL within harvest estimate CI (harvest expected to be close to RHL)	Very high (>= 150%)	10% liberalization
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	High (100 – 150%)	Reduction % = <del>difference between harvest estimate and 2-yr avg RHL, not to exceed 20%</del>
	Low (< 100%)	Reduction % = <del>difference between harvest estimate and 2-yr avg RHL, not to exceed 40%</del>

FMAT/PDT seeks guidance on if this should be further considered.



## Also considered (not implemented) – Sub-Alt. 2B-1B in FW:

RHL vs Harvest Estimate	B/B <sub>MSY</sub>	Change in Harvest
Future 2-year avg RHL > upper bound of harvest estimate CI (harvest expected to be lower than RHL)	Very high (>= 150%)	Liberalization % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 40%</u>
	High (100 – 150%)	Liberalization % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 20%</u>
	Low (< 100%)	<del>10% liberalization</del> No change
Future 2-year avg RHL within harvest estimate CI (harvest expected to be close to RHL)	Very high (>= 150%)	10% liberalization
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FMAT/PDT seeks guidance on if this should be further considered.

## **Biological reference point approach**

## **Biomass based matrix approach**

- A range of possible stock status and fishery performance indicators grouped into bins.
- Measures assigned to all bins the first time the approach is used through specifications.
- Bins with positive indicators have more liberal measures than bins with negative indicators.
- Measures would be set for two years at a time.

- **Primary metrics:**
  - **B/B<sub>msy</sub>**
    - 4 categories (very high, high, low, or overfished)
  - **F/F<sub>msy</sub>**
    - 2 categories (overfishing is not occurring, overfishing is occurring)
- **Secondary metrics** (used when categorization of primary metrics remains unchanged):
  - **Recent harvest vs RHL**
    - Overage or no overage based on most recent 3 yr avg
  - **Recent recruitment**
    - High (3 yr avg  $\geq$  median from time series for ABC projections)
    - Low (3 yr avg  $<$  median from time series for ABC projections)
  - **Biomass trend**
    - Stable or increasing
    - Decreasing

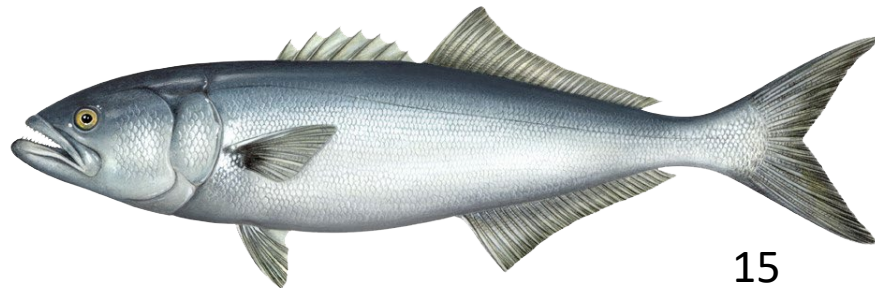
Biomass Compared to Target Level	Overfishing is Not Occurring	Overfishing is Occurring								
<p><b>Very High</b> At least 150% of the target level</p>	<p>R↑ R↓</p> <p>B↑ liberal B↓ default</p> <p>1</p>	<p>R↑ R↓</p> <table border="1"> <tr> <td>Recent harvest limits not exceeded</td> <td>B↑ B↓</td> <td>default</td> <td></td> </tr> <tr> <td>Recent harvest limits exceeded</td> <td>B↑ B↓</td> <td colspan="2">restrictive and re-evaluate measures</td> </tr> </table> <p>4</p>	Recent harvest limits not exceeded	B↑ B↓	default		Recent harvest limits exceeded	B↑ B↓	restrictive and re-evaluate measures	
Recent harvest limits not exceeded	B↑ B↓	default								
Recent harvest limits exceeded	B↑ B↓	restrictive and re-evaluate measures								
<p><b>High</b> At least the target, but below 150% of the target level</p>	<p>R↑ R↓</p> <p>B↑ liberal B↓ default</p> <p>2</p>	<p>R↑ R↓</p> <table border="1"> <tr> <td>Recent harvest limits not exceeded</td> <td>B↑ B↓</td> <td>default</td> <td></td> </tr> <tr> <td>Recent harvest limits exceeded</td> <td>B↑ B↓</td> <td colspan="2">restrictive and re-evaluate measures</td> </tr> </table> <p>5</p>	Recent harvest limits not exceeded	B↑ B↓	default		Recent harvest limits exceeded	B↑ B↓	restrictive and re-evaluate measures	
Recent harvest limits not exceeded	B↑ B↓	default								
Recent harvest limits exceeded	B↑ B↓	restrictive and re-evaluate measures								
<p><b>Low</b> Below the target level, but at least 50% of the target level</p>	<p>R↑ R↓</p> <p>B↑ default B↓ restrictive</p> <p>3</p>	<p>R↑ R↓</p> <table border="1"> <tr> <td>Recent harvest limits not exceeded</td> <td>B↑ B↓</td> <td>default</td> <td></td> </tr> <tr> <td>Recent harvest limits exceeded</td> <td>B↑ B↓</td> <td colspan="2">restrictive and re-evaluate measures</td> </tr> </table> <p>6</p>	Recent harvest limits not exceeded	B↑ B↓	default		Recent harvest limits exceeded	B↑ B↓	restrictive and re-evaluate measures	
Recent harvest limits not exceeded	B↑ B↓	default								
Recent harvest limits exceeded	B↑ B↓	restrictive and re-evaluate measures								
<p><b>Overfished</b> Less than 50% of the target level</p>	<p><b>Most restrictive/rebuilding plan</b></p> <p>7</p>									

B/B <sub>msy</sub>	Biomass Trend		
	Increasing	Stable	Decreasing
<b>Very High</b> ≥ 150%	Bin 1 (most liberal measures)		
<b>High</b> 100-150%	Bin 1		Bin 2
<b>Low</b> 50-100%	Bin 3		Bin 4
<b>Overfished</b> <50%	Bin 5		Bin 6 (most restrictive measures)

- One set of measures for a range of conditions.
- Bins based on multiple factors.
- Options were considered for measures for each bin to achieve a target level of harvest, catch, or F.
- Target level for each bin could be based on B/Bmsy.

Example B/Bmsy to define target level of harvest, catch, or F	
Biological Ref. Point	Biomass Based Matrix
Bin 1: 200%	Bin 1: 150%
Bin 2: 140%	Bin 2: 100%
Bin 3: 75%	Bin 3: 75%
Bin 4: 100%	Bin 4: 60%
Bin 5: 75%	Bin 5: 40%
Bin 6: 60%	Bin 6: 20%
Bin 7: 25%	

- Under all alternatives, stocks under an approved rebuilding plan would be subject to the requirements of that rebuilding plan.
- None of the alternatives replace rebuilding plan measures.
- In some cases, measures implemented through the alternatives may be used as temporary measures until a rebuilding plan is implemented.
  - Rebuilding plans can be implemented up to 2 years after declared overfished.



- If no action taken, the Percent Change Approach will sunset and the previous FMP requirements will be used for setting 2026 measures.
  - Measures must aim to achieve, but not exceed the RHL.
  - Measures are set for one year at a time.



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- Council/Policy Board requested further development.
- Considered, but not fully developed through previous action.
- When determining if measures should be adjusted, consider recent rec. fishing mortality rate compared to rec. fishing mortality rate target.
  - Management does not currently use or assign fishing mortality rates or fishing mortality targets for the recreational sector.
  - Previous FMAT/PDT discussed examples of how to develop these metrics, but needs further development.



- Council/Policy Board requested further development of example measures for biological reference point and biomass based matrix approach.
- Challenging to compare across alternatives without example measures.
- Would have required substantial additional analysis.
  - Recreational Demand Model not available at the time.

- Use bin thresholds as triggers for changing measures, without pre-defining measures.
  - Measures would still aim to achieve the appropriate target level of harvest, dead catch, or fishing mortality.
  - Supported by FMAT/PDT for further development.

- Issue raised by the SSC in their discussions of the HCR addenda/framework.
- Implications of rec. management approaches for the commercial sector.
- From SSC Report: *If constraining one sector is more challenging, and leads to larger deviations from the specified catch targets, the patterns of allocation may be substantially different to those specified in the policy. This can lead to effective “borrowing” of quota from the more controlled sector, and thus to increased levels of contention in the fishery management process.*

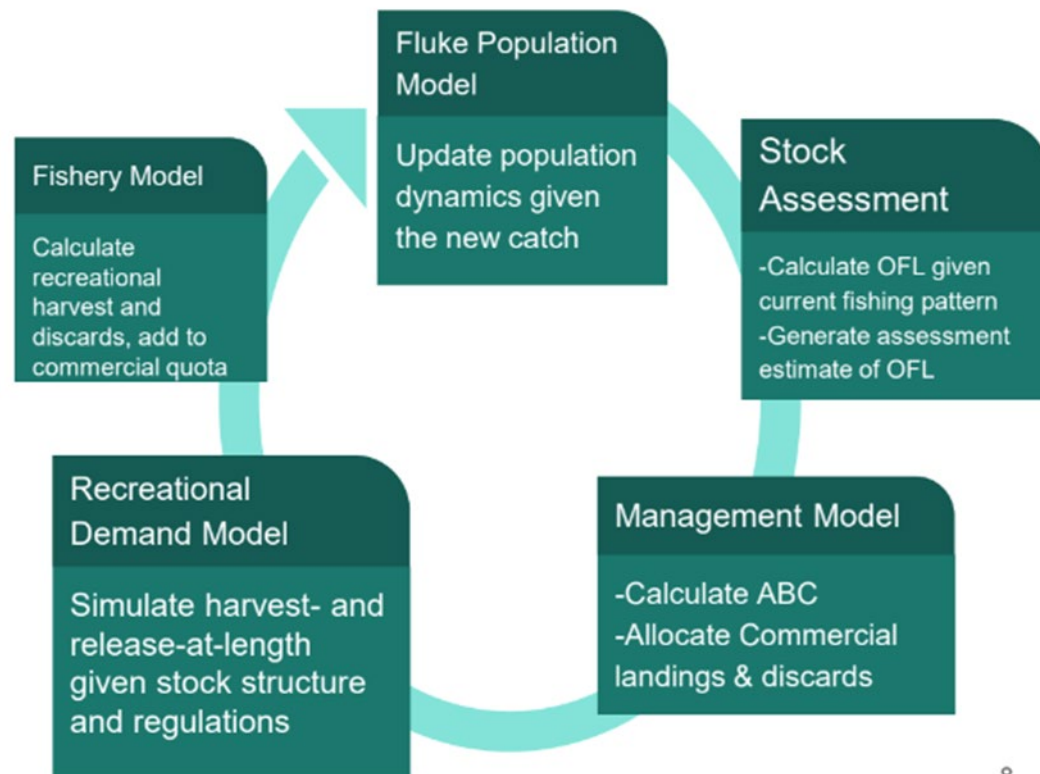
- Not typically involved in the development of management actions.
- Involvement with previous action:
  - Council requested the SSC's input on specific concerns.
  - SSC formed a sub-committee which met several times, and prepared a working paper that represented a consensus view of the entire SSC.
  - Limited time for SSC review.

- FMAT/PDT recommends **involving the SSC earlier in this action.**
- Provide periodic updates to the SSC to keep them informed.
- SSC assistance with specific needs, such as consideration of fishing mortality reference points, could be beneficial.
- Specific terms of reference will be developed at a later date.





- Coupled modeling approach incorporates stock dynamics, regulations, and angler behavior.
- FMAT/PDT met with MSE modelers, discussed plans for collaboration.
- FMAT/PDT recommends use of summer flounder MSE model in development and analysis of alternatives for this action.



- MSE can be used to sequentially test
  - **Thresholds** defining the boundaries between bins
    - E.g., categories of  $B/B_{MSY}$  and  $F/F_{MSY}$
  - **Management responses** to crossing those thresholds
    - E.g., different % change in harvest; different target levels of harvest, catch, or fishing mortality associated with each bin
  - If time, specific **measures** assigned to each management response
    - Will need to simplify to stay within desired timeline (e.g., test regional measures rather than state by state, test a few extremes for liberal/restrictive rather than full suite of measures)
- Can refine thresholds, management responses, and measures based on performance.



The MSE can evaluate many performance metrics

- Probability of overfishing
- Probability of stock being overfished
- Change in angler satisfaction/welfare
- Probability of harvest or dead catch exceeding target levels
- Harvest vs. discards
- Fishing effort
- Trip expenditures



- FMAT/PDT will work with MSE modelers to:
  - Define thresholds (can build off work from HCR 1.0)
  - Define desired performance metrics
  - Define management measures to analyze
    - May start with a smaller number of extremes (e.g., most liberal, most restrictive), get more detailed as time allows.
  - Define appropriate projection period (26 years for previous analysis)
  - Iteratively evaluate and refine all the above
  - Anticipated timeline: Fall 2023 – Summer 2024
- Goal: Use results of MSE to inform Council/Policy Board August 2024 decision on final range of alternatives for public hearings.

FMAT/PDT recommends changing the name of this action to:

## The Summer Flounder, Scup, Black Sea Bass, and Bluefish Recreational Measures Setting Process Framework/Addenda



# Commissioner/Council Member Work Group

- New group to act as a liaison between the PDT/FMAT and the Policy Board and Council.
- The purpose of this group is to provide clarification of Policy Board and Council direction and/or feedback to the PDT/FMAT.
- This group will periodically meet with the PDT/FMAT.

Name	Council Member or Commissioner
Jason McNamee	Commissioner
Nichola Meserve	Commissioner
Adam Nowalsky	Both
TBD	Council member(s)*

\*Council membership should be discussed today



# Next Steps (Part 1)



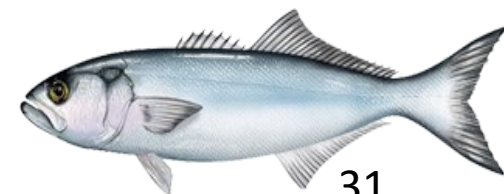
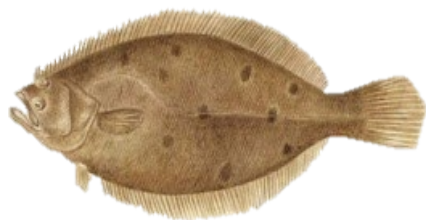
<b>August 8, 9, or 10, 2023</b>	<ul style="list-style-type: none"><li>● Council/Policy Board mtg to review progress, discuss next steps, and provide additional guidance.</li></ul>
<b>Fall 2023</b>	<ul style="list-style-type: none"><li>● FMAT/PDT and Council/Commissioner work group mtgs to continue development of alts.</li><li>● SSC meeting to review progress and next steps.</li><li>● AP meeting to review progress, provide input.</li></ul>
<b>December 2023</b>	<ul style="list-style-type: none"><li>● Council/Policy Board mtg to review progress, discuss next steps, and provide additional guidance.</li></ul>
<b>Early 2024 - Summer 2024</b>	<ul style="list-style-type: none"><li>● FMAT/PDT and Council/Commissioner work group meetings to continue development of alternatives and develop draft document for public hearings.</li></ul>

# Next Steps (Part 2)

<b>August 2024</b>	<ul style="list-style-type: none"><li>● Council/Policy Board mtg to approve final range of alternatives and approve draft document for public hearings.</li></ul>
<b>Fall 2024</b>	<ul style="list-style-type: none"><li>● Public hearings.</li></ul>
<b>Late 2024/Early 2025</b>	<ul style="list-style-type: none"><li>● FMAT/PDT and AP meetings to provide input to Council and Policy Board prior to final action.</li></ul>
<b>April 2025</b>	<ul style="list-style-type: none"><li>● Council/Policy Board mtg for final action.</li></ul>
<b>Spring-December 2025</b>	<ul style="list-style-type: none"><li>● Development, review, and revisions of framework/addenda documents.</li><li>● Federal rulemaking.</li><li>● MC/TC use new process to set 2026 recreational measures.</li></ul>
<b>Late 2025 or early 2026</b>	<ul style="list-style-type: none"><li>● Effective date of implemented changes.</li></ul>



- Provide guidance on further development of alternatives
  - Should all Percent Change Approach sub-alternatives be carried forward?
- Consider changing name of this action to the Rec. Measures Setting Process Framework/Addenda
- Consider directing the SSC to assist with development of this action, per terms of reference to be developed
- Consider plans for use of the Summer Flounder MSE model in development of this action
- Discuss the role of the new Commissioner and Council member work group and appoint Council members to this group





# Clarifying Questions







# Extra Slides



# FMAT/PDT Members

Name	Agency	Role/Expertise
Tracey Bauer	ASMFC	FMAT/PDT Co-Chair
Julia Beaty	MAFMC	FMAT/PDT Co-Chair
Chelsea Tuohy	ASMFC	FMAT/PDT Co-Chair
Mike Celestino	NJ DEP	Technical analysis and state mgmt
Alexa Galvan	VMRC	Technical analysis and state mgmt
Mark Grant	NMFS GARFO	Fisheries policy and legal requirements
Marianne Randall	NMFS GARFO	NEPA requirements
Scott Steinback	NEFSC	Recreational fisheries economist
Rachel Sysak	NY DEC	Technical analysis and state mgmt
Corinne Truesdale	RI DEM	Technical analysis and state mgmt
Sam Truesdell	MA DMF	Technical analysis and state mgmt
Sara Turner	NMFS GARFO	Scientific and technical analysis of federal fisheries mgmt