

**Recreational Harvest Control Rule Framework/Addenda – Percent Change Approach:**  
Process for determining the appropriate percent change in harvest

<b>Future RHL vs Harvest Estimate</b>	<b>Stock biomass compared to the target stock size (<math>B/B_{MSY}</math>)</b>	<b>Change in Harvest</b>
Future 2-year average RHL is <b>greater than</b> the upper bound of the harvest estimate confidence interval (harvest is expected to be lower than the RHL)	<b>Very high</b> (at least 150% of the target stock size)	<b>Liberalization</b> percent based on the difference between the harvest estimate and the 2-year average RHL, <u>not to exceed 40%</u>
	<b>High</b> (between the target and 150% of the target stock size)	<b>Liberalization</b> percent based on the difference between the harvest estimate and the 2-year average RHL, <u>not to exceed 20%</u>
	<b>Low</b> (below the target stock size)	<b>Liberalization: 10%</b>
Future 2-year average RHL is <b>within</b> the confidence interval of the harvest estimate (harvest is expected to be close to the RHL)	<b>Very high</b> (at least 150% of the target stock size)	<b>Liberalization: 10%</b>
	<b>High</b> (between the target and 150% of the target stock size)	<b>No change: 0%</b>
	<b>Low</b> (below the target stock size)	<b>Reduction: 10%</b>
Future 2-year average RHL is <b>less than</b> the lower bound of the harvest estimate confidence interval (harvest is expected to exceed the RHL)	<b>Very high</b> (at least 150% of the target stock size)	<b>Reduction: 10%</b>
	<b>High</b> (between the target and 150% of the target stock size)	<b>Reduction</b> percent based on the difference between the harvest estimate and the 2-year average RHL, <u>not to exceed 20%</u>
	<b>Low</b> (below the target stock size)	<b>Reduction</b> percent based on the difference between the harvest estimate and the 2-year average RHL, <u>not to exceed 40%</u>

The table above has been updated to reflect the options selected by the Mid-Atlantic Fishery Management Council and Atlantic States Marine Fisheries Commission on June 7, 2022. For additional information about this action, please see <https://www.mafmc.org/actions/hcr-framework-addenda>.

**Key Terms:**

- **Biomass (B):** The size of a stock of fish measured in weight. For summer flounders, scup, black sea bass, and bluefish, the biomass levels and biomass targets used in management are based on spawning stock biomass.
- **Biomass target ( $B_{MSY}$ ):** The stock size associated with maximum sustainable yield (MSY), as defined by a stock assessment.  $B_{MSY}$  is the largest average catch that can be taken from a stock over time under existing environmental conditions without negatively impacting the reproductive capacity of the stock.
- **Confidence Interval:** the upper and lower bound around a point estimate to indicate the range of possible values given the uncertainties around the estimate.
- **Recreational Harvest Limit (RHL):** The total allowable annual recreational fishery harvest, set based on information from the stock assessment, considerations about scientific and management uncertainty, allocations between the commercial and recreational sectors, and assumptions about dead discards.