# Bluefish Allocations and Rebuilding Amendment <br> FMAT Meeting: May 28, 2020, 1:00 p.m. - 4:00 p.m. 

Meeting Summary (Dated: June 3, 2020)
Note: Alternatives that the Council and Board removed from the amendment at their June meeting are crossed out within this document.

The objective of this meeting was for the Fishery Management Action Team (FMAT) to further refine draft alternatives, including identifying alternatives that should not be further pursued in this action due to feasibility or timing concerns. The FMAT discussed the implications of each draft approach and worked to identify any additional analyses needed to guide the Council and Board during their next discussion of this action in mid-June. The Council/Board are scheduled to approve draft alternatives for inclusion in a public hearing document in August.

A summary of the FMAT's prior April $13^{\text {th }}$ meeting can be found in the May Council/Board briefing materials at: https://www.mafmc.org/briefing/may-2020.

At their joint May 6 meeting, the Council and Board agreed to retain for further development all alternative categories previously discussed by the FMAT. All issues are listed below with discussion and summary points.

FMAT members present: Ashleigh McCord (GARFO), Cynthia Ferrio (GARFO), Matt Cutler (NEFSC), Samantha Werner (NEFSC), Tony Wood (NEFSC), Mike Celestino (NJ DFW), Dustin Colson Leaning (ASMFC Staff), and Matthew Seeley (MAFMC Staff)

Others present: Greg DiDomenico (GSSA), Mike Waine (ASA), Rusty Hudson (DSF), and Jose Montanez (MAFMC Staff)

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## Summary of FMAT recommendations for each Amendment issue.

| Issue | Approach | Summary of FMAT Recommendation |
| :---: | :---: | :---: |
| FMP Goals and Objectives | No Action/Status quo: Maintain current allocations | Must include in amendment. |
|  | Proposed Revisions | FMAT has revised the language, but further guidance is requested. Note: FMP Goals and Objectives are not alternatives, but will revised through the Amendment process and included in the public hearing document for comments and revision. |
| Sector Allocations | 2.01 No Action/Status quo: Maintain current allocations | Must include in amendment. |
|  | 2.02-2.05 Allocations based on catch data, GARFO discards | Guidance requested on removal or inclusion. |
|  | 2.06-2.09 Allocations based on catch data, NEFSC discards | Guidance requested on removal or inclusion. |
|  | 2.10-2.13 Allocations based on landings data | Recommend removal. The current FMP allocates catch between the two sectors. Developing allocation percentages based on landings data does not properly account for the release aspect of the recreational fishery. |
|  | Other. Phase-in or trigger? | FMAT requests guidance on removal or inclusion. Both approaches may overcomplicate allocations considering that the rebuilding plan will already add complexity to setting the RHL and the commercial quota. |
|  | Other. Pounds or numbers of fish? | Recommend using pounds to stay consistent with the specifications process. |
| Commercial Allocations to the States | 3.1 No Action/Status quo: Maintain current allocations | Must include in amendment. |
|  | 3.2-3.6 Landings-based allocations | Keep for further development. |
|  | Other. Florida proposal: regionalbased commercial allocations | Guidance requested on removal or inclusion. |
|  | Other. Phase-in or trigger? | FMAT requests guidance on removal or inclusion. Both approaches may overcomplicate allocations considering that the rebuilding plan will already add complexity to setting the RHL and the commercial quota. |
| Transfers | 4.1.1 No Action/Status quo: Maintain current transfer provisions | Must include in amendment. Recommended by the FMAT. |

$\left.\left.\begin{array}{|l|l|l|} & \begin{array}{l}\text { 4.1.2 Refereed: A neutral party (e.g. } \\ \text { ASMFC) matches transfer partners } \\ \text { to ensure that one or more states } \\ \text { are not requesting quota transfers } \\ \text { too early. }\end{array} & \begin{array}{l}\text { Recommend removal. The FMAT is unsure how this } \\ \text { approach improves the current method considering all } \\ \text { current protocols need to remain. The additional } \\ \text { necessary protocols overcomplicate the process. }\end{array} \\ \hline & \begin{array}{l}\text { 4.2.1 No Action/Status quo: } \\ \text { Maintain current transfer provisions }\end{array} & \text { Must include in amendment. }\end{array} \right\rvert\, \begin{array}{ll}\text { 4.2.2 Transfer Cap: Set a transfer } \\ \text { cap as a fixed percentage of the } \\ \text { ABC. }\end{array} \quad \begin{array}{l}\text { Keep for further development. FMAT is requesting } \\ \text { further guidance on the development of this } \\ \text { alternative. }\end{array}\right\}$

## 1. Fishery Management Plan Goals and Objectives

### 1.1 Existing FMP Goals and Objectives

The no action/status quo alternative keeps the existing Fishery Management Plan (FMP) Goals and Objectives.

Goal: Conserve the bluefish resource along the Atlantic coast.

1. Objective: Increase understanding of the stock and of the fishery.
2. Objective: Provide the highest availability of bluefish to U.S. fishermen while maintaining, within limits, traditional uses of bluefish.
3. Objective: Provide for cooperation among the coastal states, the various regional marine fishery management councils, and federal agencies involved along the coast to enhance the management of bluefish throughout its range.
4. Objective: Prevent recruitment overfishing.
5. Objective: Reduce the waste in both the commercial and recreational fisheries.

### 1.2 Revised Draft FMP Goals and Objectives

The proposed FMP Goals and Objectives will continue to be revised based on input at subsequent Council/Board meetings with final decisions being made in August.

Goal 1. Conserve the bluefish resource through stakeholder engagement to maintain sustainable recreational fishing and commercial harvest.

Objective 1.1. Achieve and maintain a sustainable spawning stock biomass and rate of fishing mortality.
Objective 1.2. Promote practices that reduce discard mortality within the recreational and commercial fishery.
Objective 1.3. Maintain effective coordination between the National Marine
Fisheries Service, Council, Commission, and member states to support the development and implementation of management measures.

Strategy 2.1. Promote compliance and effective enforcement of regulations.
Strategy 2.2. Promote science, monitoring, and data collection that support and enhance effective ecosystem-based management of the bluefish resource.
Goal 2. Provide fair and equitable access to the fishery across all user groups throughout the management unit.

Objective 2.1. Ensure the implementation of management measures provides fair and equitable access to the resource across to all groups along the coast.
Objective 2.2. Consider the economic and social needs and priorities of all groups that access the bluefish resource in the development of new management measures.
Objective 2.3. Maintain effective coordination with stakeholder groups to ensure optimization of economic and social benefits.

## 2. Commercial and Recreational Sector Allocations

Under the current Fishery Management Plan (FMP) for bluefish, the Acceptable Biological Catch (ABC) equals the fishery level Annual Catch Limit (ACL), which is then divided into a commercial
and recreational Annual Catch Target (ACT) based on the allocation percentages defined in the FMP. Sector-specific expected discards are subtracted from the sector-specific ACTs to derive a commercial quota and a Recreational Harvest Limit (RHL). Aside from the status quo option, the following approaches revise the allocation percentages based on modified base years or different data sets.

### 2.01 No Action/Status Quo

The no action/status quo alternative keeps the existing sector allocation percentages, which were based on old General Canvass and MRFSS landings data from 1981-1989 (Table 1). The recreational and commercial allocations are $83 \%$ and $17 \%$, respectively.

Table 1. Bluefish landings (000’s lbs) along the U.S. Atlantic coast from 1981-1989 (see Table 23 in Amendment 1).

| Year | Rec | Comm | Total | \%Rec | \%Comm |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1981 | 95,288 | 16,454 | 111,742 | $85 \%$ | $15 \%$ |
| 1982 | 83,006 | 15,430 | 98,436 | $84 \%$ | $16 \%$ |
| 1983 | 89,122 | 15,799 | 104,921 | $85 \%$ | $15 \%$ |
| 1984 | 67,453 | 11,863 | 79,316 | $85 \%$ | $15 \%$ |
| 1985 | 52,515 | 13,501 | 66,016 | $80 \%$ | $20 \%$ |
| 1986 | 92,887 | 14,677 | 107,564 | $86 \%$ | $14 \%$ |
| 1987 | 76,653 | 14,504 | 91,157 | $84 \%$ | $16 \%$ |
| 1988 | 48,222 | 15,790 | 64,012 | $75 \%$ | $25 \%$ |
| 1989 | 39,260 | 10,341 | 49,601 | $79 \%$ | $21 \%$ |
| 1990 | 30,557 | 13,771 | 44,328 | $69 \%$ | $31 \%$ |
| 1991 | 32,997 | 13,581 | 46,578 | $71 \%$ | $29 \%$ |
| 1992 | 24,275 | 11,478 | 35,753 | $68 \%$ | $32 \%$ |
| 1993 | 20,292 | 10,122 | 30,414 | $67 \%$ | $33 \%$ |
| 1994 | 15,541 | 9,453 | 24,994 | $62 \%$ | $38 \%$ |
| 1995 | 14,174 | 7,847 | 22,021 | $64 \%$ | $36 \%$ |
| 1996 | 14,735 | 9,288 | 24,023 | $61 \%$ | $39 \%$ |
|  |  |  |  |  |  |
| Avg. 81-89 | 71,601 | 14,262 | 85,863 | $83 \%$ | $17 \%$ |
| Avg. 81-96 | 49,811 | 12,744 | 62,555 | $75 \%$ | $25 \%$ |

Source: Unpublished NMFS General Canvass and MRFSS data.

### 2.02-2.05 Sector Allocations Based on Catch Data: GARFO Discard Estimation Method

These alternatives use catch data and a specified time series (see Table 2) to develop allocations between the commercial and recreational sectors. The recreational landings and catch data were pulled from the Marine Recreational Information Program (MRIP) query website. Landings (A+B1) includes the estimate of all harvested fish in pounds. MRIP provides estimates of live releases in numbers of fish and not in pounds. The approach used by the Greater Atlantic Regional

Fisheries Office (GARFO) to monitor the recreational fishery was used to generate estimates of dead discards.

Discards in pounds were calculated by multiplying the live releases (B2s) estimate by the mean weight of landed fish specified at the wave and state level. For specific state and wave entries lacking data on harvested fish, an average weight of harvested fish from a similar wave/state were calculated. In this way, live releases in numbers of fish were converted to an estimate in weight. This value was then multiplied by the $15 \%$ discard mortality rate that is assumed in Bluefish stock assessments to produce the dead discard estimates in pounds.

The commercial data was pulled from the ACCSP data warehouse in the form of a data request on May 12, 2020 from the ACCSP bluefish data lead Joseph Myers. Landings data were validated by staff from each state. One potential shortcoming of developing sector allocations based on catch data is that no estimates of commercial discards are available. According to the 2019 Operational Stock Assessment and the 2015 Benchmark Stock Assessment for Bluefish, commercial discards are considered negligible and thus were assumed to be zero for the purposes of developing the sector allocations.

Table 2. Recreational and commercial sector allocation alternatives based on catch data using the GARFO discard estimation methodology

| Alternative | Allocation Time Series | Recreational <br> Allocation | Commercial <br> Allocation |
| :---: | :---: | :---: | :---: |
| Status quo | 1981-1989 (Landings-based) | $83 \%$ | $17 \%$ |
| $\mathbf{2 . 0 2}$ | 5 year (2014-2018) | $89 \%$ | $11 \%$ |
| $\mathbf{2 . 0 3}$ | 10 year (2009-2018) | $89 \%$ | $11 \%$ |
| $\mathbf{2 . 0 4}$ | 20 year (1999-2018) | $87 \%$ | $13 \%$ |
| $\mathbf{2 . 0 5}$ | Full Time Series (1981-2018) | $86 \%$ | $14 \%$ |

### 2.06-2.09 Sector Allocations Based on Gatch Data: NEFSC Discard Estimation

 MethodThese alternatives use catch data and a specified time series (see Table 3) to develop sector allocations. The recreational landings data set $(\mathrm{A}+\mathrm{B} 1)$ is identical to the data set used for alternatives 2.02-2.05, but the methodology used to estimate dead disfard in weight differs from the method used by GARFO. The Northeast Fisheries Science Center (NEFSC) relies on the same MRIP estimates of released alive fish (B2s). However, the method differs in how the released fish mean weight values are calculated. This calculation relies on release data from the MRIP intercept survey, survey data from the American Littoral Society, and volumteer angler surveys from CT, RI and NJ. The surveys provide weight at lengths data, which are then used to produce the live release
estimates in weight ${ }^{4}$. A $15 \%$ discard mortality rate is applied to generate the estimate of dead discards in pounds. Ultimately, these dead discard estimates are used in the benchmark and eperational-stock assessments. The same commercial data set was used to develop determatives 2.02-2.09.

Table 3. Recreational and commercial sector allocation alternatives based on catch data using the NEFSC discard estimation methodology

| Alternative | Allocation-Time-Series | Recreational <br> Allocation | Commercial <br> Allocation |
| :---: | :---: | :---: | :---: |
| Status-que | 1981-1989 (Landings-based) | $83 \%$ | $17 \%$ |
| 2.06 | 5 year (2014-2018) | $91 \%$ | $9 \%$ |
| 2.07 | 10 year (2009-2018) | $91 \%$ | $9 \%$ |
| 2.08 | 20 year $(1999-2018)$ | $90 \%$ | $10 \%$ |
| 2.09 | Full Time-Series $(19812018)$ | $\mathrm{N} / \mathrm{A}^{*}$ | $\mathrm{~N} / \mathrm{A}^{*}$ |

*NEFSC dead discard estimates are only available 1985-2018
The Council/Board, Monitoring Committee, and FMAT have all had discussions concerning which dead discard estimation methodology should be used for bluefish management. Proponents for the NEFSC method have said that this method is more scientifically rigorous because unlike the GARFO method, it utilizes a discard length data set, which paired with a length-weight key ean produce more accurate estimates of discards in pounds. Those opposed to its use say that the American Littoral Society target larger fish than the average angler, which creates an upward bias of the estimate of dead discards in pounds. Additionally, some were concerned that the NEFSG method has a geographic bias because the majority of the release at length data comes from Rhode Island, Connecticut and New Jersey.

The methodologies of estimating dead discards in pounds are displayed side by side in Figure 1. The NEFSC method produces discard estimates that vary between 1.1 to 3.9 times that of the discard estimates produced by the GARFO method.

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Figure 1. Recreational dead discard estimates from 1981-2018 calculated using the GARFO and NEFSG method.

### 2.10-2.13 Sector Allocations Based on Landings Data

These alternatives use landings data and a specified time series (see Table 4) to develop the allocations between sectors. The recreational data was pulled from MRIP with landings in weight equal to $\mathrm{A}+\mathrm{B} 1$. The commercial data is from the ACCSP data warehouse (data request).

Table 4. Recreational and commercial sector allocation alternatives based on landings data

| Alternative | Allocation Time Series | Recreational <br> Allocation | Commercial <br> Allocation |
| :---: | :---: | :---: | :---: |
| Status quo | 1981-1989 (Landings-based) | $83 \%$ | $17 \%$ |
| $\mathbf{2 . 1 0}$ | 5 year (2014-2018) | $86 \%$ | $14 \%$ |
| $\mathbf{2 . 1 1}$ | 10 year (2009-2018) | $86 \%$ | $14 \%$ |
| $\mathbf{2 . 1 2}$ | 20 year (1999-2018) | $84 \%$ | $16 \%$ |
| $\mathbf{2 . 1 3}$ | Full Time Series (1981-2018) | $84 \%$ | $16 \%$ |

## FMAT Comments/Recommendations on Issue 2

The FMAT noted that many of the allocation time series produce very similar percentages. The FMAT agreed that the selection of an allocation time series alternative should have a biological or socioeconomic reasoning. The most recent time series reflects the current performance of the recreational and commercial fisheries. While the 20-year average and the full time series are designed to also recognize the historical importance of bluefish for each sector.

The FMAT also discussed the merits of developing allocations based on catch data versus landings data. A few FMAT members indicated that many comments received through the public scoping period spoke of the importance of recognizing the catch and release nature of the fishery when allocating between the commercial and recreational sectors. Allocating on a landings basis would ignore this aspect of the fishery.

Several FMAT members recommended further exploration of the assumption that commercial discards are negligible before further developing allocations based on catch data. One FMAT member recalled an analysis conducted for the 2015 benchmark stock assessment, which revealed that commercial dead discards represented about 1-2\% of total catch in any given year. At the time, this analysis was conducted using old MRIP estimates. The recalibrated MRIP estimates are much higher by comparison, and thus commercial dead discards are likely to comprise an even smaller percentage of total catch. On the other hand, reports from states in recent years, as states have started to approach or meet their quota, have begun to question whether this remains true.

One FMAT member supported further exploration of developing allocations in numbers of fish as opposed to pounds of fish. This approach would remove the need to choose between the GARFO or NEFSC method of estimating recreational dead discards in pounds since both methods use the same number of released fish. However, another FMAT member noted that the current method of setting ABCs, ACTs, RHL and commercial quota are all set in pounds and not in numbers of fish. Discussion within the FMAT ensued as to whether specifications could be set in numbers (which would eliminate the need to choose between GARFO and NEFSC release weight methods that produce very different estimates), and the FMAT is looking into this. The FMAT believes it is important to ensure that units used in the specification process (pounds or number of fish) match those used for reallocation. To develop allocations based on numbers of fish as opposed to pounds of fish creates a disconnect between how the sectors are allocated catch and how that catch is accounted for.

The FMAT analyzed both the NEFSC and GARFO method of estimating recreational dead discards and determined that both have their strengths and weaknesses. The FMAT acknowledged that the strength of the NEFSC method is in its use of length frequency of release data to inform the average weight of discarded fish. The GARFO method's assumption that the length frequency of releases is equal to the length frequency of landed fish is problematic. However, analysis of where the release at length data is collected versus where MRIP recreational releases are occurring revealed a geographic bias. It appears that on average about $30 \%$ of live releases occur annually in NC, yet none of the release at length data comes from NC. On the other hand, RI, CT, and NJ volunteer angler surveys on average represent over $75 \%$ of the release at length data when these states represent less than $30 \%$ of live releases annually. As such, the FMAT was unable to come to a consensus on which method is clearly the more scientifically rigorous of the two. Further guidance is needed from the Board and Council on which dead discard estimation methodology should be pursued for developing sector allocations.

FMAT members also inquired as to whether an alternative should be developed that incorporates as phased-in reallocation (versus instantly changing allocations in a given year). The FMAT also discussed whether allocation triggers might be appropriate (one allocation under one set of
conditions, and an alternate allocation under alternate conditions). Discussion ensued as to whether a phased-in approach, with or without triggers, would be complicated by a rebuilding schedule and the FMAT is requesting guidance from the Council/Board as to whether these alternatives (changes to allocations over time, allocation triggers) should be further developed.

## Expected Future Analysis:

- Evaluate an updated time series of commercial discards to determine whether commercial discards are a negligible portion of overall catch.


## Public Comment:

One member of the public spoke in opposition to developing allocations between the sectors based on catch data. Allocations based on catch rather than landings dilutes the importance of quota transfers that occurred for many years from the recreational to the commercial fishery. The stakeholder also indicated that transfers never impacted recreational regulations, but were an important part of the bluefish fishery.

## 3. Commercial Allocations to the States

### 3.1 No Action/Status quo

The no action/status quo alternative keeps the existing landings-based commercial allocations to the states which were set through Amendment 1 using General Canvass Data (Table 5).

Table 5. State-by-state commercial bluefish allocations along the U.S. Atlantic coast set using data from 1981-1989 (see Table 60 in Amendment 1).

| State | Pounds | $\%$ | Quota Without <br> Increase in <br> Landings | Quota Allowing <br> for Increase in <br> Landings |
| :---: | :---: | :---: | :---: | :---: |
| ME | 858,177 | $0.6675 \%$ | 39,740 | 70,093 |
| NH | 532,032 | $41.3800 \%$ | 24,637 | 43,454 |
| MA | $8,621,803$ | $6.7063 \%$ | 399,255 | 704,198 |
| RI | $8,739,090$ | $6.7975 \%$ | 404,686 | 713,777 |
| CT | $1,625,500$ | $1.2644 \%$ | 75,273 | 132,765 |
| NY | $13,330,736$ | $10.3690 \%$ | 617,314 | $1,088,806$ |
| NJ | $19,018,645$ | $14.7932 \%$ | 880,707 | $1,553,374$ |
| DE | $2,410,900$ | $1.8753 \%$ | 111,643 | 196,914 |
| MD | $3,853,253$ | $2.9972 \%$ | 178,435 | 314,720 |
| VA | $15,248,930$ | $11.8610 \%$ | 706,141 | $1,245,477$ |
| NC | $41,154,504$ | $32.0110 \%$ | $1,905,766$ | $3,361,351$ |
| SC | 45,161 | $0.1000 \%$ | 5,953 | 10,501 |
| GA | 12,205 | $0.1000 \%$ | 5,953 | 10,501 |
| FL | $12,912,995$ | $10.0440 \%$ | 597,970 | $1,054,687$ |
| Total | $128,363,931$ | 100 | $5,953,473$ | $10,500,618$ |
|  |  |  |  |  |

Source: NMFS General Canvass Data

## 3.2-3.6 Commercial State-to-State Allocations

At the joint May meeting the Council and Board agreed to move forward with developing six alternatives using only landings data for the commercial state-to-state allocations because commercial discards are considered negligible in both the benchmark and operational stock assessments. The commercial data is from the ACCSP data warehouse (data request).

Table 6. State-by-state commercial bluefish allocations along the U.S. Atlantic coast using different proposed time series.

| Landings-Based Allocation Alternatives |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3.1 |  | 3.2 | 3.3 | 3.4 | 3.5 | 3.6 |
| State | Status quo (1981-1989) | $\begin{gathered} 5 \text { year } \\ (2014-2018) \end{gathered}$ | $\begin{gathered} 10 \text { year } \\ (2009-2018) \end{gathered}$ | $\begin{gathered} 20 \text { year } \\ (1999-2018) \end{gathered}$ | Time Series (1981-2018) | $\begin{aligned} & 1 / 2 \text { '81-'89 } \\ & \text { 1/2'09-18 } \end{aligned}$ |
| ME | 0.67\% | 0.00\% | 0.01\% | 0.01\% | 0.43\% | 0.49\% |
| NH | 0.41\% | 0.03\% | 0.12\% | 0.17\% | 0.65\% | 0.33\% |
| MA | 6.71\% | 10.64\% | 10.16\% | 7.53\% | 7.18\% | 7.66\% |
| RI | 6.80\% | 11.81\% | 9.64\% | 8.00\% | 7.96\% | 7.59\% |
| CT | 1.26\% | 1.18\% | 1.00\% | 0.73\% | 1.12\% | 1.19\% |
| NY | 10.37\% | 20.31\% | 19.94\% | 19.44\% | 14.76\% | 13.01\% |
| NJ | 14.79\% | 11.23\% | 13.94\% | 15.23\% | 15.57\% | 14.57\% |
| DE | 1.88\% | 0.58\% | 0.40\% | 0.39\% | 1.09\% | 1.47\% |
| MD | 3.00\% | 1.50\% | 1.84\% | 1.54\% | 2.10\% | 2.68\% |
| VA | 11.86\% | 4.62\% | 5.85\% | 6.92\% | 8.79\% | 10.26\% |
| NC | 32.01\% | 32.06\% | 32.38\% | 36.94\% | 33.52\% | 32.13\% |
| SC | 0.10\% | 0.00\% | 0.00\% | 0.00\% | 0.02\% | 0.03\% |
| GA | 0.10\% | 0.00\% | 0.00\% | 0.01\% | 0.01\% | 0.01\% |
| FL | 10.04\% | 6.07\% | 4.75\% | 3.10\% | 6.91\% | 8.59\% |
| Total | 100.00\% | 100.01\% | 100.03\% | 100.02\% | 100.10\% | 100.00\% |

## FMAT Comments/Recommendations on Issue 3

As with Issue 2, several FMAT members also inquired as to whether an alternative should be developed that incorporates as phased-in reallocation (versus instantly changing allocations in a given year). The FMAT also discussed whether allocation triggers might be appropriate (one allocation under one set of conditions, and an alternate allocation under alternate conditions). Discussion ensued as to whether a phased-in approach, with or without triggers, would be complicated by a rebuilding schedule and the FMAT is requesting guidance from the Council/Board as to whether these alternatives (changes to allocations over time, allocation triggers) should be further developed. The FMAT expressed support for the alternatives as listed but questioned whether "phasing in" changes to allocations would be advisable. A phased in approach has the potential to mitigate socioeconomic consequences of big changes in quota for states. However, one FMAT member noted that phasing in allocation changes could be challenging to coordinate during a rebuilding period that has the potential to already be complex and
destabilizing. The FMAT noted they want to ensure altering the commercial allocations to the states does not make management unduly complicated for the respective states.

Several FMAT members thought that there should be consistency in selecting base years for developing the sector allocations and the commercial state allocations. For example, if a 10-year time series is selected for the sector-based allocations, then the FMAT would recommend a 10year time series be selected for the commercial allocations to the states. However, the Board and Council could certainly justify that one time series is appropriate for generating allocations between sectors and an altogether different time series may be more appropriate for developing allocations of commercial quota between the states.

The FMAT received a proposal from the state of Florida to reorganize how states receive their commercial allocation. In summary, the proposal suggests regional based allocations (New England: ME-CT, Mid-Atlantic: NY-VA, South Atlantic: NC-FL) instead of state-by-state allocations. If there are concerns regarding one state harvesting too much of the allocated quota, Florida proposes imposing commercial trip limits to ensure all states within a region have access to the resource. The proposal is attached to this document as Appendix 1. Upon review of this proposal, the FMAT recommended presenting it to the Council/Board at the joint June meeting for discussion to see if it should be included as an alternative for further development. The FMAT does want to caution the Council/Board that this regional approach will have major implications for how the transfer provisions need to change. Additionally, the FMAT noted that moving away from state allocations has the potential to benefit states with low allocations, while potentially negatively impacting states with large quotas. While this proposal does provide flexibility, the real challenge would be the details concerning how and when commercial trip limit regulations are implemented within regions.

## 4. Transfers

### 4.1.1 Commercial State-to State Transfers: No Action/Status Quo

The no action/status quo alternative keeps the existing commercial state-to-state transfer provisions in place as described in Amendment 1.

### 4.1.2 Commercial State-to-State Transfers: Refereed

This alternative offers a neutral party (e.g. ASMFC) to match up transfer partners and make sure that one or more states are not requesting quota transfers too early. This approach warrants individual states to project their landings and identify when they will land their individual state quotas. Once states reach a certain percentage of their own quota, they can notify the neutral party that they want to request a quota transfer. The neutral party will then need to review which states are not going to land their quota based on the reported projections. This will then allow the neutral party to initiate a quota transfer from the two states and ensure additional quota will be available for other states that are projected to land their own state quota later in the year.

This approach was proposed to the FMAT by leadership, but still requires further development. The discussion questions below identify key areas that require more specific guidelines.

Note: The potential reallocation of commercial state-to-state quotas (Alternatives 3.2-3.6) will most likely reduce the need for transfers in the near future, however, as the fishery continues to change transfers requests are likely to increase in occurrence.

## Discussion Questions:

1. What should be the threshold quota at which states are allowed to request a transfer?
2. Is it equitable to provide preference to states that land their quota earlier in the fishing year by allowing them to request transfers before states that land their quota later in the year?
3. When excess quota is scarce, and multiple states are requesting quota, what metric should be used to determine which states receive transferred quota?

## FMAT Comments/Recommendations on Issue 4: Commercial State-to-State Transfers

Staff presented the commercial state-to-state transfer refereed alternative to the FMAT and noted that if this alternative is pursued further refinement is still needed. The FMAT recognizes the objective of the refereed approach is to promote fair and equitable access across states; however, the FMAT noted that if this approach is to be developed further, analysis would need to be conducted to better understand each state's landing trends, when transfers are requested, and how long they take to process. The refereed approach may also need to be coupled with the development of commercial seasons to ensure availability to all states. Ultimately, the FMAT is unsure how much this approach improves the current method. States requesting a transfer will still need to communicate with other states that are willing to transfer quota. This alternative may simply be adding a neutral party to broker the deal, while adding additional administrative burden on ASMFC. Overall, the FMAT identified multiple constraints and complications to the refereed approach which could ultimately inhibit states from utilizing this transferring tool altogether. Thus, the FMAT recommends the status quo alternative.

If this alternative is pursued further, the FMAT requests guidance from the Board and Council on the following items: 1) Defining a uniform approach for how states calculate their landings projections, 2) Determining the need for commercial seasons, 3) Defining the threshold level at which states can request quota, and 4) How quota would be distributed between states requesting transfers.

### 4.2.1 Sector Transfers: No Action/Status Quo

The no action/status quo alternative keeps the existing sector transfer provisions in place as described in Amendment 1. In summary, recreational landings from the prior year would be compared to the proposed RHL. If, based on this comparison, the recreational fishery was not anticipated to land their limit, the commercial quota could be set above the $17 \%$ sector allocation up to 10.50 million $\mathrm{lb}(4,763 \mathrm{mt})$; with the RHL adjusted down accordingly. This is the average commercial landings for the period 1990-1997. However, if the recreational landings were projected to reach the harvest limit for that year, then the commercial quota would be implemented without the sector transfer.

### 4.2.2 Sector Transfers: Transfer Cap

Under this alternative, a transfer cap is defined as a fixed percentage of the ABC. This approach allows quota transfers to scale with biomass. Unlike the provisions described in the status quo option, transfers could still occur even when the commercial quota is above 10.5 million pounds.

Through the supplemental scoping process, it became clear many recreational stakeholders are not supportive of transfers from the recreational to commercial sector. Many comments indicated concern about the effect of transfers on the abundance of fish available to the recreational sector. As such, it may be useful to develop criteria tied to stock status for when sector transfers are prohibited. For example, it may be beneficial to prohibit transfers until the stock has been rebuilt. A less stringent option could be the prohibition of transfers while the stock is below the threshold.

### 4.2.3 Sector Transfers: Bi-directional Transfers

In the current plan, transfers are determined through the specifications process. The Council and Board has the ability to recommend a sector transfer when recreational landings are projected to not achieve the recreational harvest limit. During specifications, an average of the last three years of recreational landings are used to project the next year's landings. NOAA Fisheries then has the ability to adjust the transfer total in March/April once the prior year of recreational landings is finalized. Similarly, the Board and Council could determine whether a transfer from the commercial to the recreational sector is warranted. Table 6 below outlines when a transfer could occur as well in which direction quota would be transferred.

Table 6. Proposed triggers for bi-directional transfers across sectors.

| Scenario | Commercial Sector | Recreational Sector | Outcome |
| :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | Projected to achieve quota | Projected to achieve RHL | No transfer |
| $\mathbf{2}$ | Projected to achieve quota | Projected to not achieve RHL | Transfer to comm |
| $\mathbf{3}$ | Projected to not achieve quota | Projected to achieve RHL | Transfer to rec |
| $\mathbf{4}$ | Projected to not achieve quota | Projected to not achieve RHL | No transfer |

## FMAT Comments/Recommendations on Issue 4: Sector Transfers

The FMAT supported the continued development of bi-directional transfers as well as adjusting the transfer cap. Several FMAT members noted there is plenty of public support for allowing sector transfers to go both ways and that it encourages equitable allocation and economic efficiency. The FMAT supported the idea of utilizing a percentage of the ABC to determine the transfer cap in a given year because of its ability to scale a transfer with biomass. One FMAT member noted that the transfer cap was initially developed when biomass was below the threshold, and that it would likely need adjustment for when the stock rebuilds. A more dynamic transfer cap based on biomass also makes more sense if the transfer is to occur in both directions.

The FMAT had some difficulty conceptualizing how a transfer from the commercial sector to the recreational sector would occur. Some FMAT members thought that uncertainty in projections and administrative challenges may preclude fishery managers' ability to efficiently liberalize recreational measures. Some thought this approach could instead be used as a mechanism to
prevent accountability measures. The idea being that quota transferred from the commercial to the recreational sector in a given year would provide an additional buffer to the RHL and prevent an overage. One FMAT member noted that there are some equity concerns with this approach and wondered how much this would actually benefit the recreational fishery. The FMAT requests further guidance from the Board and Council on how a transfer from the commercial to the recreational fishery would work regarding setting recreational measures.

Public Comment: One member of the public fully supported the concept of bi-directional sector transfers. The stakeholder also spoke in favor of liberalizing recreational measures should a transfer from the commercial to the recreational sector occur. Another member of the public spoke in support of maintaining commercial state-to-state transfers, as well as transfers between sectors. The stakeholder also noted that their support of implementing commercial trip limits to ensure the commercial sector does not exceed its quota.

## 5. Rebuilding Plan

Six different rebuilding alternatives are offered below (Table 7). Under a rebuilding plan, the stock will be considered rebuilt once spawning stock biomass (SSB) reaches the SSBMSy proxy equal to 198,717 mt (Figures 2 and 3). The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires the overfished stock to be rebuilt within ten years once the regional office notifies the Council of the overfished state. Under the current amendment timeline, the rebuilding plan would be implemented at the beginning of the year 2022.

The rebuilding plans will begin in 2021 with the $7,385 \mathrm{mt} \mathrm{ABC}$ that was already approved by the Council/Board (pending review and approval of this ABC in August 2020) regardless of which alternative is selected. The rebuilding plans assume that the full ABC will be caught. Regardless of which approach is selected, the assessment scientist will perform assessment updates and rerun projections every two years. The SSC will use the projections to develop recommendations for the specification packages that remain in line with the goals of the rebuilding plan. For example, if a constant harvest approach is selected the SSC will use the projections to recommend an ABC associated with the rebuilding catches. If an F rebuild approach is taken, the assessment scientist will rerun the projections under the yearly specified F rebuild to generate updated ABCs . If the $\mathrm{P}^{*}$ approach is selected, the assessment scientist will generate new OFLs based on the assessment updates. The SSC will then recommend ABCs associated with the rebuilding plan for the next two years.

Table 7. Rebuilding projection alternatives and the duration until rebuilt.

| Alternative | Rebuilding Plan | Duration | Adjustment to <br> Council Risk Policy |
| :---: | :---: | :---: | :---: |
| $\mathbf{5 . 1}$ | Status Quo | N/A | N/A |
| $\mathbf{5 . 2}$ | Constant Harvest | 4 years | No |
| $\mathbf{5 . 3}$ | Constant Fishing Mortality | 10 years | Yes |
| $\mathbf{5 . 4}$ | Constant Fishing Mortality | 7 years | Yes |
| $\mathbf{5 . 5}$ | Constant Harvest (Highest Catch) | 10 years | Yes |
| $\mathbf{5 . 6}$ | $\mathrm{P}^{*}$ (Council Risk Policy) | 5 years | N/A |

## Atlantic bluefish SSB and Recruitment



Figure 2. Atlantic bluefish spawning stock biomass (SSB; solid black line) and recruitment at age 0 ( R ; gray vertical bars) by calendar year. The horizontal dashed line is the updated $\mathrm{SSB}_{\text {MSY }}^{\text {proxy }}=$ SSB $_{40 \%}=198,717 \mathrm{mt}$. The dotted black line is the $\mathrm{SSB}_{\text {Threshold }}=99,359 \mathrm{mt}$.


Figure 3. Total fishery catch (metric tons; mt; solid line) and fishing mortality (F, peak at age 3; squares) for Atlantic bluefish. The horizontal dashed line is the updated $F_{\text {MSY }}$ proxy $=\mathrm{F}_{35 \%}=\mathbf{0 . 1 8 3}$.

### 5.1 No Action/Status Quo

The no action/status quo alternative would not initiate a rebuilding plan and thus, would keep the bluefish stock in an overfished state. The Council is legally bound to develop a rebuilding pan and this alternative is included as a formality.

### 5.2 Constant Harvest: 4-year Rebuilding Plan

For this projection alternative, the FMAT requested a constant harvest approach (current ABC) be utilized until the stock is rebuilt (Table 8 and Figure 4). This projection rebuilds the stock by end of year 2025 (4-year rebuilding plan). This alternative does not require an adjustment to the Council risk policy because the catches are less than those described under the P* approach.

Table 8. Constant harvest rebuilding projection.

| Year | SSB <br> (MT) | Recruits <br> (000s) | F | Catch <br> (MT) | SSBMSY <br> (MT) | SSBthresh <br> (MT) |
| :---: | :---: | ---: | :---: | :---: | :---: | ---: |
| 2019 | 92,779 | 43,282 | 0.279 | 22,614 | 198,717 | 99,359 |
| 2020 | 102,165 | 43,455 | 0.087 | 7,385 | 198,717 | 99,359 |
| 2021 | 115,085 | 43,428 | 0.075 | 7,385 | 198,717 | 99,359 |
| 2022 | 137,450 | 43,460 | 0.064 | 7,385 | 198,717 | 99,359 |
| 2023 | 162,495 | 43,353 | 0.052 | 7,385 | 198,717 | 99,359 |
| 2024 | 197,141 | 43,239 | 0.045 | 7,385 | 198,717 | 99,359 |
| 2025 | 229,121 | 43,379 | 0.039 | 7,385 | 198,717 | 99,359 |
| 2026 | 269,777 | 43,362 | 0.034 | 7,385 | 198,717 | 99,359 |



Figure 4. Constant harvest rebuilding projection.

### 5.3 Constant Fishing Mortality (10 years): 10-year Rebuilding Plan

For this projection alternative, the FMAT requested a constant fishing mortality approach (F) be utilized until the stock is rebuilt (Table 9 and Figure 5). This projection rebuilds the stock by end of year 2031 (10-year rebuilding plan). This alternative requires an adjustment to the Council risk policy for this rebuilding plan only because the catches are higher than those described under the $P^{*}$ approach.
Table 9. Constant 10-year F rebuilding projection.

| Year | SSB <br> (MT) | Recruits <br> (000s) | F | Catch <br> (MT) | SSBMSY <br> (MT) | SSBthresh <br> (MT) |
| :---: | :---: | ---: | :---: | :---: | :---: | ---: |
| 2019 | 92,732 | 43,262 | 0.281 | 22,614 | 198,717 | 99,359 |
| 2020 | 102,174 | 43,402 | 0.088 | 7,385 | 198,717 | 99,359 |
| 2021 | 115,012 | 43,304 | 0.076 | 7,385 | 198,717 | 99,359 |
| 2022 | 131,624 | 43,389 | 0.177 | 19,616 | 198,717 | 99,359 |
| 2023 | 141,297 | 43,274 | 0.177 | 21,894 | 198,717 | 99,359 |
| 2024 | 154,661 | 43,462 | 0.177 | 22,990 | 198,717 | 99,359 |
| 2025 | 162,976 | 43,235 | 0.177 | 24,398 | 198,717 | 99,359 |
| 2026 | 175,734 | 43,367 | 0.177 | 25,907 | 198,717 | 99,359 |
| 2027 | 184,062 | 43,488 | 0.177 | 26,904 | 198,717 | 99,359 |
| 2028 | 189,900 | 43,425 | 0.177 | 27,595 | 198,717 | 99,359 |
| 2029 | 193,952 | 43,561 | 0.177 | 28,100 | 198,717 | 99,359 |
| 2030 | 197,035 | 43,300 | 0.177 | 28,463 | 198,717 | 99,359 |
| 2031 | 199,167 | 43,326 | 0.177 | 28,723 | 198,717 | 99,359 |



Figure 5. Constant 10-year F rebuilding projection.

### 5.4 Constant Fishing Mortality (7 years): 7-year Rebuilding Plan

For this projection alternative, the FMAT requested a constant fishing mortality approach (F) be utilized until the stock is rebuilt (Table 10 and Figure 6). This projection rebuilds the stock by end of year 2028 (7-year rebuilding plan). This alternative requires an adjustment to the Council risk policy for this rebuilding plan only because the catches are higher than those described under the $P^{*}$ approach.

Table 10. Constant 7-year F rebuilding projection.

| Year | SSB <br> (MT) | Recruits <br> (OOOs) | F | Catch <br> (MT) | SSBMSY <br> (MT) | SSBthresh <br> (MT) |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 2019 | 92,755 | 43,320 | 0.279 | 22,614 | 198,717 | 99,359 |
| 2020 | 102,186 | 43,531 | 0.087 | 7,385 | 198,717 | 99,359 |
| 2021 | 115,073 | 43,310 | 0.075 | 7,385 | 198,717 | 99,359 |
| 2022 | 132,150 | 43,390 | 0.166 | 18,477 | 198,717 | 99,359 |
| 2023 | 143,271 | 43,292 | 0.166 | 20,813 | 198,717 | 99,359 |
| 2024 | 158,152 | 43,272 | 0.166 | 22,033 | 198,717 | 99,359 |
| 2025 | 168,006 | 43,395 | 0.166 | 23,532 | 198,717 | 99,359 |
| 2026 | 182,311 | 43,336 | 0.166 | 25,121 | 198,717 | 99,359 |
| 2027 | 191,855 | 43,578 | 0.166 | 26,191 | 198,717 | 99,359 |
| 2028 | 198,520 | 43,411 | 0.166 | 26,939 | 198,717 | 99,359 |



Figure 6. Constant 7-year F rebuilding projection.

### 5.5 Constant Harvest (Highest Catch): 10-year Rebuilding Plan

For this projection alternative, the FMAT requested a constant harvest approach with the highest possible catch to rebuild the stock in 10 years (Table 11 and Figure 7). This projection rebuilds the stock by end of year 2031 (10-year rebuilding plan). This alternative requires an adjustment to the Council risk policy for this rebuilding plan only because the catches are higher than those described under the $P^{*}$ approach.

Table 11. Constant harvest rebuilding projection using the highest catch to rebuild over 10years.

| Year | SSB <br> (MT) | Recruits <br> (000s) | F | Catch <br> (MT) | SSBMSY <br> (MT) | SSBthresh <br> (MT) |
| :--- | :---: | ---: | :---: | ---: | :---: | ---: |
| 2019 | 92,732 | 43,262 | 0.280 | 22,614 | 198,717 | 99,359 |
| 2020 | 102,174 | 43,402 | 0.087 | 7,385 | 198,717 | 99,359 |
| 2021 | 115,012 | 43,304 | 0.075 | 7,385 | 198,717 | 99,359 |
| 2022 | 128,975 | 43,389 | 0.231 | 25,094 | 198,717 | 99,359 |
| 2023 | 133,420 | 43,274 | 0.215 | 25,094 | 198,717 | 99,359 |
| 2024 | 142,065 | 43,462 | 0.209 | 25,094 | 198,717 | 99,359 |
| 2025 | 147,216 | 43,235 | 0.200 | 25,094 | 198,717 | 99,359 |
| 2026 | 158,145 | 43,367 | 0.188 | 25,094 | 198,717 | 99,359 |
| 2027 | 166,971 | 43,488 | 0.180 | 25,094 | 198,717 | 99,359 |
| 2028 | 175,055 | 43,425 | 0.173 | 25,094 | 198,717 | 99,359 |
| 2029 | 183,301 | 43,561 | 0.166 | 25,094 | 198,717 | 99,359 |
| 2030 | 191,143 | 43,300 | 0.160 | 25,094 | 198,717 | 99,359 |
| 2031 | 198,717 | 43,326 | 0.154 | 25,094 | 198,717 | 99,359 |



Figure 7. Constant harvest rebuilding projection using the highest catch to over 10-years.

### 5.6 P* Approach (Council Risk Policy): 5-year Rebuilding Plan

For this projection alternative, the FMAT requested using the Council's risk policy to rebuild the stock (Table 12 and Figure 8). This projection rebuilds the stock by end of year 2026 (5-year rebuilding plan).

Table 12. Rebuilding projection based on $P^{*}$ using the Council's risk policy to rebuild over 5-years.

|  | OFL Total <br> Catch <br> (MT) | ABC Total <br> Catch <br> (MT) | ABC F | ABC Pstar | ABC SSB <br> (MT) | SSBMSY <br> (MT) | SSBthresh <br> (MT) |
| :--- | :---: | ---: | :---: | ---: | :---: | ---: | ---: |
| 2019 | 15368 | 22,614 | 0.280 | 0.183 | 92,732 | 198,717 | 99,359 |
| 2020 | 16212 | 7,385 | 0.087 | 0.207 | 102,174 | 198,717 | 99,359 |
| 2021 | 17205 | 7,385 | 0.075 | 0.239 | 115,012 | 198,717 | 99,359 |
| 2022 | 20237 | 11,222 | 0.098 | 0.291 | 135,586 | 198,717 | 99,359 |
| 2023 | 23998 | 15,181 | 0.113 | 0.338 | 154,257 | 198,717 | 99,359 |
| 2024 | 26408 | 18,653 | 0.127 | 0.394 | 176,619 | 198,717 | 99,359 |
| 2025 | 28807 | 23,048 | 0.144 | 0.431 | 191,063 | 198,717 | 99,359 |
| 2026 | 30848 | 26,677 | 0.157 | 0.450 | 207,619 | 198,717 | 99,359 |



Figure 8. Rebuilding projection based on $P^{*}$ using the Council's risk policy to rebuild over 5-years.

## FMAT Comments/Recommendations on Issue 5

Staff presented projections for the six rebuilding plan alternatives to the FMAT. The FMAT noted that longer projections may have more uncertainty, however, ABCs or F values will be adjusted (depending on which projection is selected) as specifications are developed and reviewed to ensure the stock is rebuilt within the proposed timeline.

Staff briefed the FMAT of the potential need to adjust the Council's risk policy under alternatives $5.3,5.4$, and 5.5 . If one of these alternatives are selected, the Council would adjust its risk policy for this rebuilding plan only. The Council's current risk policy states that the SSC should provide ABCs that are the lesser of rebuilding ABCs or standard risk policy ( $\mathrm{P}^{*}$ ) ABCs (Alternative 5.6 follows the current $\mathrm{P}^{*}$ approach). The catches in 5.2 are lower than in 5.6 (the $\mathrm{P}^{*}$ approach) and would not warrant a revision to the risk policy. In absence of a risk policy adjustment, ABCs prescribed under 5.6 would override rebuilding plans that result in higher ABCs (Alternative 5.3, 5.4 , or 5.5 ). So for alternatives $5.3,5.4$, or 5.5 , the Council would adjust its risk policy to indicate that in this, and only this, specific case of bluefish rebuilding initiation, the risk policy of the Council is adjusted to use this the number of years associated with the rebuilding timeline (thus limiting this adjustment both temporally and by species). This is the only way that the Council can consider a rebuilding plan longer than five years and allow the higher associated catches.

The FMAT is now requesting guidance from the Council/Board on which alternative(s) they prefer and if there are any other rebuilding alternatives they would like to request. Figure 9 presents catch and SSB comparisons for each rebuilding alternative.


Figure 9. Catch (left) and spawning stock biomass (right) comparisons under each rebuilding alternative over time.

## 6. Other (Management Uncertainty, For-Hire Sector Separation, de minimis)

### 6.1 Management Uncertainty

This alternative set is available to potentially alter the bluefish flowchart. Specifically, the proposed flowchart created sector specific ACLs that allow for management uncertainty to be accounted for within each sector.

### 6.1.1 Management Uncertainty: No Action/Status Quo

The no action/status quo alternative keeps the existing management uncertainty provisions in place as described in Amendment 1 (Figure 10).


Figure 10. Current bluefish flow chart representing a reduction for management uncertainty prior to the sector split.

### 6.1.2 Management Uncertainty: Post-Sector Split

Under this alternative, the ABC is allocated between two sector-specific ACLs and management uncertainty is accounted for within each sector. (Figure 11).


Figure 11. Proposed bluefish flow chart representing a reduction for management uncertainty within each sector, respectively.

## FMAT Comments/Recommendations on Issue 6: Management Uncertainty

The FMAT agreed that this concept should be left in the amendment for further consideration. Alternative 6.1.2 would refine the management uncertainty tool to enable it to target one specific sector while not negatively affecting the other sector.

### 6.2 For-Hire Sector Separation (Reference Material - Alternatives are 6.2.01-6.2.10)

Recreational sector separation can be considered through either separate allocations for the forhire sector and private anglers, or as separate management measures for the two recreational sectors without a fully separate allocation, as is currently allowed in the plan.

This option would specify within the FMP a separate percentage allocation to the for-hire recreational sector of either the ABC limit, the recreational ACT, or the RHL. There are several potential ways in which a separate allocation could be created for the for-hire sector, described below with comparison to the current process which does not include sector separation. These potential options are illustrated in Figure 12. The differences between some of these options are nuanced, and the pros and cons of each approach should be further explored by the FMAT if these alternatives remain in the amendment.
A. Current FMP: The ABC is divided into the recreational ACT and the commercial ACT. Projected recreational discards are removed from the recreational ACT to derive the recreational harvest limit. Both the private and for-hire recreational sectors are held to a single combined ACT and RHL, and performance evaluation and accountability measures are applied to both fisheries together.
B. Separate ACTs: The ABC would be allocated three ways: into a private recreational ACT, a for-hire recreational ACT, and a commercial ACT. This method would require development of these three allocations, and development of separate accountability measures for the private recreational and for-hire sectors.
C. Recreational Sub-ACTs: The ABC would remain divided into the recreational ACT and commercial ACT based on the allocation approach selected through this action. The recreational ACT would be further allocated into private and for-hire sub-ACTs. This method would also require development of separate accountability measures for the private recreational and for-hire sectors.
D. Separate RHLs: The private recreational and for-hire recreational sectors would remain managed under a single recreational ACT. Separate RHLs could be developed for each sector for the purposes of determining management measures. Accountability under this option would likely be partially at the RHL level (in the sense that performance to the RHL would likely be evaluated for each recreational sector for the purposes of adjusting future management measures to constrain harvest to the RHL) and partially at the ACT level (in the sense that accountability measures must be established at the ACT level to trigger a response if the entire recreational ACT is exceeded). This approach includes separate management of harvest only; dead discards are not included in RHLs and would be accounted for at the ACT level.

Note: Any approach creating separate ACTs or sub-ACTs would require the development of corresponding separate accountability measures.


Figure 12. Conceptual flowcharts of potential recreational sector separation configurations including A) status quo, B) separate ACT allocations, C) Sub-ACT allocations, and D) separate RHLs.
In addition to determining where sector separation occurs, consideration should be given to which data sources and methods to use for sector allocation, including:

- How to use MRIP and/or VTR data in the allocations;
- Whether to allocate using catch or harvest (related to the question of whether to allocate at the ACT or RHL level);
- Whether to allocate in numbers of fish or pounds;
- The base years or other method of evaluating this recreational sector data.

Many stakeholders during scoping expressed an interest in sector separation to better make use of for-hire VTR data, which they perceive as being more accurate due to for-hire reporting requirements. However, there are also some concerns about the accuracy of self-reported for-hire

VTR data. VTR data also includes only estimates of numbers of fish, not weight, so incorporating VTR data into allocations would require either establishing allocations based on numbers of fish, developing a method to estimate weights of harvested and discarded fish from the numbers reported on VTRs, or adding a required data field for weight to the VTR electronic forms. The FMAT previously noted that some state vessels are not required to submit VTRs for state-only vessels and cautioned that data from these groups would be missing if VTRs are used to determine for-hire allocations.

Comparing for-hire harvest estimates from MRIP to for-hire VTR data for bluefish shows that on average for-hire VTR harvest is lower than MRIP for-hire estimates since 1997 (Figure 13).

Table 13 and Table 14 include examples of sector separation using MRIP estimates to generate landings and catch-based allocations, respectively. However, these are just a few examples of the several possible ways to look at these splits and the FMAT should discuss whether these approaches are appropriate for presentation at the June Council and Board meeting.


Figure 13. Comparison of federal party/charter vessel VTR estimates of landed bluefish vs. MRIP estimated for-hire landed bluefish, 1995-2018.

### 6.2.01 For-Hire Sector Separation: No Action/Status Quo

The no action/status quo alternative does not include for-hire sector separation in the Amendment. The recreational sector would remain as described in Amendment 1.

### 6.2.02-6.2.04 For-Hire Sector Separation Based on Landings Data

Under these alternatives, the recreational fishery has separate allocations for the for-hire and private/shore fishing modes (Table 13).

Note: Quota monitoring for the for-hire sector will likely have to be conducted using MRIP data because not all for-hire vessels submit Electronic Vessel Trip Reports (eVTR) (e.g. state vessels in state waters) and data needs to be compared to the private sector, which does not have eVTR requirements.

Table 13. Recreational for-hire and private/shore allocation alternatives based on landings data

| Alternative | Allocation Time Series | For-Hire <br> Allocation | Private/Shore <br> Allocation |
| :---: | :---: | :---: | :---: |
| Status quo | N/A | N/A | N/A |
| $\mathbf{6 . 2 . 0 2}$ | 5 year (2014-2018) | $7 \%$ | $93 \%$ |
| $\mathbf{6 . 2 . 0 3}$ | 10 year (2009-2018) | $9 \%$ | $91 \%$ |
| $\mathbf{6 . 2 . 0 4}$ | 20 year (1999-2018) | $12 \%$ | $88 \%$ |

### 6.2.05-6.2.07 For-Hire Sector Separation Allocations Based on Catch Data: Modified-GARFO Discard Method

Under these alternatives, the recreational fishery has separate allocations for the for-hire and private/shore fishing modes (Table 14).

Since the GARFO method for calculating dead discards lacks a mode-specific component, a modified version of the GARFO method was needed to generate catch-based allocations for the recreational sectors. Discards in pounds were calculated by multiplying the live releases (B2s) estimate by the mean weight of landed fish specified at the mode (charter, shore, private/rental, etc.) and year level. In this way, live releases were converted from an estimate in numbers of fish to weight. This value was then multiplied by the $15 \%$ discard mortality rate that is assumed in Bluefish stock assessments. One admitted shortcoming of the modified GARFO method is that it lacks a regional and temporal component, but it has the added benefit of a mode component. Figure 14 displays how the modified GARFO method compares to the original GARFO method and the NEFSC method for generating estimates of dead discards.

Note: Quota monitoring for the for-hire sector will likely have to be conducted using MRIP data because not all for-hire vessels submit eVTR (e.g. state vessels in state waters) and data needs to be compared to the private sector, which does not have eVTR requirements.

Table 14. Recreational for-hire and private/shore allocation alternatives based on catch data

| Alternative | Allocation Time Series | For-Hire <br> Allocation | Private/Shore <br> Allocation |
| :---: | :---: | :---: | :---: |
| Status quo | N/A | N/A | N/A |
| $\mathbf{6 . 2 . 0 2}$ | 5 year (2014-2018) | $6 \%$ | $94 \%$ |
| $\mathbf{6 . 2 . 0 3}$ | 10 year (2009-2018) | $8 \%$ | $92 \%$ |
| $\mathbf{6 . 2 . 0 4}$ | 20 year (1999-2018) | $10 \%$ | $90 \%$ |



Figure 14. Recreational dead discard estimates from 1981-2018 calculated using the GARFO method, modified GARFO method and the NEFSC method.
6.2.08-6.2.10 For-Hire Sector Separation Allocations Based on Catch Data: NEFSC Discard Method
These alternatives were excluded from the analysis because there was a lack of data necessary to generate dead discards by recreational fishing mode using the NEFSC methodology.

## FMAT Comments/Recommendations on Issue 6: For-Hire Sector Separation

The FMAT reached consensus that for-hire sector separation should be removed from the amendment. The FMAT expressed several concerns with pursuing this issue further. Foremost, the FMAT thought that developing for-hire sector allocations is such a large task that it could significantly delay the amendment timeline. FMAT members were concerned about the reliability of MRIP data at the mode level when generating allocations. MRIP data with high PSE values poses additional issues for catch accounting and accountability. There is also the difficulty of determining how accountability measures are implemented between modes. Lastly, according to MRIP data, the for-hire sector is a relatively small portion of the recreational fishery and for-hire fishermen may draw issue with the resultant small allocation.

Furthermore, the FMAT indicated that the current recreational management measures in place offer the for-hire sector different measures than private anglers. Those management measures (5fish bag limit for for-hire and 3 -fish bag limit for private anglers) will be reviewed every year as part of the specifications packages and will be revised accordingly in relation to stock status and
the ABCs. Given the vast uncertainties in how the fishery will perform under these proposed alternatives and the ability to change management measures through specifications, the FMAT recommended removal of the for-hire sector separation alternatives from the amendment. However, the FMAT suggests that if the Council and Board decide that this issue should be pursued further, for-hire sector separation could be addressed through a separate action at a later date. For-hire sector separation may also be better addressed in the context of a multi-species action.

### 6.3 Recreational de minimis

Under the Commission's Fishery Management Plan, states which land less than $0.1 \%$ of the coastwide commercial landings in the year prior are exempt from fishery independent monitoring requirements for the following year. However, the federal plan does not require states to submit fishery independent monitoring reports, and as such has no de minimis provision.

### 6.3.1 Recreational de minimis: No Action/Status Quo

Under this alternative, de minimis status would remain excluded from the Bluefish Amendment maintaining status quo for both the Commission and Federal plan.

### 6.3.2 Recreational de minimis: State Waters

This alternative expands upon the Commission's de minimis provision to include a recreational component. During scoping, Georgia DNR proposed that a three-year average of combined recreational and commercial landings compared against coastwide landings for the same period with a $1 \%$ threshold would be used to determine status. A de minimis determination would relieve a state from having to adopt fishery regulations in addition to the existing exemption of the requirement to conduct fishery independent monitoring.

This alternative does complicate coastwide management of bluefish in that it poses additional challenges from an enforcement perspective and potential unforeseen challenges from a catchaccounting perspective. From an enforcement perspective, anglers will need to be cognizant of the differing regulations between state and federal waters, as well as differing regulations when crossing state lines. However, these concerns are already at play when states implement recreational measures within state lines under the Commission's conservation equivalency policy that differ from the coastwide measures. From a catch accounting perspective, the proposed de minimis provision would reduce a state's accountability for its recreational harvest. Currently, the plan ensures that all states are held accountable by adjusting recreational measures to ensure coastwide recreational catch does not exceed the recreational harvest limit (RHL). A state that meets the de minimis criteria would not be held accountable the same way, which raises questions about fairness and equity across state user groups.

## FMAT Comments/Recommendations on Issue 6: de minimis status

The FMAT agreed that the de minimis provision should be kept in the amendment but should remain a state waters only provision. The FMAT agreed that applying the de minimis provision to federal waters would overcomplicate the issue and would likely not be approved by NOAA

Fisheries. If the Board is interested in pursuing this further, the FMAT requests further guidance on the two questions below.

## Questions for the Board:

1. Is a $1 \%$ threshold an appropriate cutoff to be considered de minimis given that the cutoff under the current Commission de minimis provision is $0.1 \%$ of total commercial landings?
2. What would be the repercussions if a state exceeded the $1 \%$ threshold? Would a state be required to adopt the latest recreational measures the following year or be found out of compliance?

## Appendix 1

## Florida Proposal: Regional Commercial Allocations Instead of Commercial Allocations to the States

Currently, the commercial quota is allocated to the states using historical landings data from 19811989. In the past, this has been an effective way to fairly distribute the commercial quota to allow each state to have a profitable bluefish fishery. However, given the overfished status and new specifications that will likely go into effect, if the Council and Commission were to move forward with updating the 1981-1989 time series that sets the current state allocations, it will disproportionally impact states like Florida. Under the new specifications, the commercial sector quota decreased by about 64\%, meaning that all states took a significant decrease in the amount of bluefish they can commercially harvest. If the state-to-state commercial allocation percentages are adjusted using the methods proposed in the "Rebuilding Plan and Reallocation Amendment" the commercial fishery in Florida will lose the opportunity to be a viable and profitable fishery.

## Alternative allocation option:

An alternative option to address the issue described above would be to move from individual state allocations to region-wide allocations. Could the Fishery Management Action Team (FMAT) potentially look into separating the commercial allocation based on region instead of by state?

## Suggested regions

- New England region - Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut
- Mid-Atlantic region - New York, New Jersey, Pennsylvania, Delaware, Maryland, and Virginia
- South Atlantic region - North Carolina, South Carolina, Georgia, and Florida

If states are concerned with a single state harvesting too much of the regional allocation, additional precaution can be put in place to help avoid this. For example, in-season commercial vessel limit step downs could be used, similar to what is currently in place for the south Atlantic Spanish Mackerel fishery.

Example: The bluefish season could start off with no commercial vessel limit (current regulations). As the fishing season continues, once $75 \%$ of the regional quota is harvested, or predicted to be harvested, a 1000 lb . commercial vessel limit would go into effect. Once $90 \%$ of the regional quota is harvested, the vessel limit would step down to 500 lbs. This idea would help slow down the overall harvest and extend the fishing season.

The alternative allocation option described above will not disproportionally impact states compared to what is currently proposed in the "Rebuilding Plan and Reallocation Amendment" and will continue to allow access to all commercial fishermen, regardless of what state they fish in.


[^0]:    ${ }^{4}$ Shepherd, Gary R., et al. "The migration patterns of bluefish (Pomatomus saltatrix) along the Atlantic coast determined from tag recoveries." Fishery Bulletin, vol. 104, no. 4, 2006, p. 559+. Gale Academic OneFile Accessed 1 Jume 2020.

