



Mid-Atlantic Fishery Management Council

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**EAFM Summer Flounder Management Strategy Evaluation
August 2021 Council Meeting**

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This briefing document provides an update on recent activities regarding the summer flounder management strategy evaluation (MSE) project. Development of this MSE is part of the continued implementation of the Mid-Atlantic Fishery Management Council's (Council) Ecosystem Approach to Fisheries Management (EAFM) structured framework process.

At the August 2021 Council meeting, the Council will be meeting jointly with the Atlantic States Marine Fisheries Commission (ASMFC) Summer Flounder, Scup, and Black Sea Bass Board (Board) to review the progress made to date and provide feedback and direction on management objectives and alternatives for the project. The Council has been briefed on the MSE progress on several occasions, with the latest update at the April 2021 Council meeting¹. While these previous updates have been scheduled around prior joint meetings (just before or after), this will be the first time the MSE project will be presented and discussed jointly with the Board.

Here we provide an overview of the summer flounder MSE project but will focus on recent activities of a core stakeholder group and the future direction of the project. Much more information about the summer flounder MSE project, including details and background documents for past/upcoming meetings and activities, technical work group and core group membership, and project work products and analysis can be found at:

<https://www.mafmc.org/actions/summer-flounder-mse>.

During this meeting, the Council and Board will review the management objectives and alternatives developed by the core stakeholder group and during public scoping. The goal for the meeting will be to provide feedback on the proposed list objectives and alternatives (i.e., should something be deleted or added to the list) and then approve the project objectives and alternatives for further evaluation and consideration by the technical work group and core stakeholder group.

Background

Mid-Atlantic EAFM Process

As part of its EAFM Guidance Document, the Council established a structured framework process to incorporate ecosystem considerations into the evaluation of policy choices and trade-offs as they affect Council-managed species and the broader ecosystem (Figure 1). Analyzing

¹ See the April 2021 staff memo for additional information on last EAFM update found at:

https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/605e3ce6ddddd69f62fc1ae/1616788711461/TAB01_EAFM-Updates_2021-04.pdf.

management procedures through a comprehensive management strategy evaluation (MSE) is the third step in the Council’s EAFM structured framework process. The Council initiated the development of an MSE following the completion of an ecosystem conceptual model that considered different high-risk factors affecting summer flounder and its fisheries. Using the results of the conceptual model, the Council selected the following management question for further development and analysis through an MSE:

Evaluate the biological and economic benefits of minimizing discards (dead and alive) and converting discards into landings in the recreational sector. Identify management strategies to effectively realize these benefits.



Figure 1. The Mid-Atlantic Fishery Management Council’s EAFM structured decision framework to incorporate ecosystem considerations into management (from Gaichas et al. 2016). [\[reference\]](#)

When selecting this question, the Council discussed the various management challenges in addressing and reducing regulatory discards, particularly within the recreational sector of the summer flounder fishery. Evaluating recreational discard considerations with a new approach (i.e., an MSE) and within an ecosystem context could provide management with the tools and guidance to address a Council and stakeholder priority that has been difficult to resolve. Utilizing an MSE also provides a unique opportunity to align the EAFM process and the Council’s typical recreational review and management process.

Why Management Strategy Evaluation?

MSE is a tool that allows scientists, managers, and stakeholders to test different strategies (e.g., regulations or harvest control rules) and their ability to achieve specified management objectives. In many cases, an MSE uses quantitative models to simulate a population, its ecosystem, the different strategies being considered, and the interaction between all of these components. In addition, an MSE can consider and evaluate uncertainty, risk, and broader ecosystem factors; therefore, MSEs are an integral part of the Council’s EAFM structured framework process.

An MSE won’t specify a single outcome or strategy that will solve and address all management issues or concerns associated with recreational summer flounder discards. It will, however, provide the Council and Board an opportunity to evaluate and balance different management strategies and their associated biological, social, and economic trade-offs that best address their management objectives in an ecosystem context. This allows the Council and Board to test different strategies before anything gets implemented and make more informed decisions when selecting a strategy or combination of strategies that are most likely to achieve the desired outcomes.

Stakeholder Engagement Overview

A critical component of successful MSE development is an inclusive stakeholder approach to ensure there is public input and engagement throughout the process to help guide management decisions. Providing for clear and defined opportunities for input and communication between stakeholders and managers can provide for a more robust and comprehensive MSE and provide greater buy-in and support for the results and potential management decisions. Stakeholder engagement has been a particularly important focus for this project since the MSE process is

relatively new to the Council and Board and there has been mixed reaction to their use and success in other regions. Stakeholders will help the Council and Board identify clearly defined objectives, performance metrics, and management strategies to test as part of the MSE.

Opportunities for Input

In an effort to solicit as much stakeholder input for this project as possible, the technical work group developed an extensive outreach and engagement approach. A variety of scoping and outreach initiatives were conducted covering a range of targeted audiences and level of engagement for input (Figure 2). The goal was to invest a significant amount of time up front and early in the process on education, outreach, and input to help ensure more productive feedback and better outcomes at the end of the project. In addition, each outreach initiative would become more focused and build upon each other where the input and results from one activity would then be used to help inform the discussion and input in later activities.

The first stakeholder engagement initiative was a kick-off workshop² targeted to the relevant Council and ASMFC Advisory Panel (AP) membership. This workshop was held via webinar and introduced AP members to the MSE process and simulated a mock MSE workshop using an example fishery with the goal of familiarizing participants about MSE goals and expectations.

The next initiative was an online scoping survey to collect information and solicit input regarding stakeholder perspectives and experiences on current and future management of the recreational summer flounder fishery. Any interested stakeholder could complete the survey and answer questions covering a variety of topics such as recreational discard concerns and fishery implications, management objectives and strategies, data sources, and uncertainties. The response to the online survey was extremely strong with 818 individual responses covering all states from Massachusetts through North Carolina. The technical work group conducted a variety of analyses that evaluated all of the input received and developed a [scoping feedback summary document](#) that identified common themes and concerns, evaluated regional similarities/differences, and identified possible management priorities. The document also describes the potential use of stakeholder suggestions and ideas within the scope of the MSE (i.e., what ideas can/can't be modeled and what may/may not be within the scope of the MSE). The workgroup also developed an online [interactive and searchable tool](#) that allows users to review stakeholder scoping feedback for all survey questions by state, region, and stakeholder type. Given the high response, the input received from the scoping survey was used extensively in the other stakeholder engagement activities.

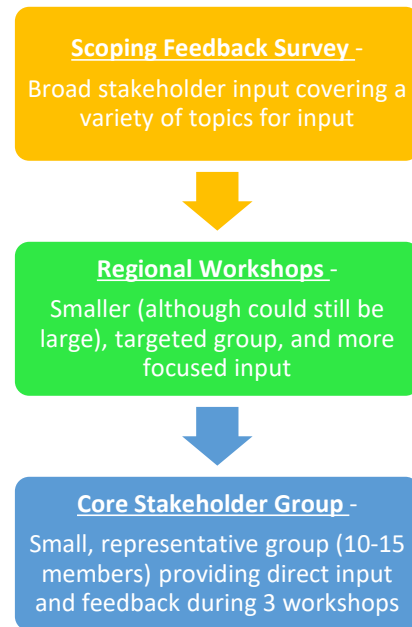


Figure 2. Process and approach for stakeholder engagement and input for EAFM summer flounder MSE project.

² The agenda, all meeting materials, presentations, and webinar recording for the September 22, 2020 AP meeting can be found at: <https://www.mafmc.org/council-events/2020/eop-sfsbsb-ap-meeting-sept22>

Following the scoping survey, a series of regional (MA-CT, NY-DE, and MD-NC) workshops³ were held to provide for a more targeted engagement of stakeholders in order to get input and feedback about the recreational summer flounder fishery in a more structured and interactive approach. Similar to the scoping survey, the workshops provided an opportunity to provide ideas early in the process and before any decisions were made on topics such as recreational discard concerns, possible management objectives, and performance metrics to achieve these objectives. Regional findings from the scoping survey, tailored to each workshop, were used to help focus the discussion. In general, the feedback from the regional workshops was very similar to that found during the scoping survey but the interactive nature of the workshops allowed participants to provide greater context and detail on their concerns and priority management objectives and strategies.

MSE Core Stakeholder Group

With the broad stakeholder scoping activities complete, a shift to a more targeted and focused stakeholder engagement phase was started. A small core group of stakeholders representing the range of fishery perspectives was formed to help the Council more efficiently and effectively progress through the MSE process. This core stakeholder group will function as the main source of input to the technical work group and management and will provide feedback through a series of focused workshops designed to elicit their input on management outcomes and review model simulation results. Core stakeholder group members will participate and attend all workshops, represent both their interests and those of the fishery, be open minded and collaborative, and support the potential outcomes of the MSE process.

Throughout the various stakeholder engagement opportunities described in the previous section, a solicitation of interest to serve on the core stakeholder group was also conducted. Accounting for everyone that expressed interest in serving on the core group and those recommended by a peer to serve on the group, there were over 580 possible participants to fill the 10-15 spots that would comprise the core stakeholder group. Given the level of interest and limited space available, the technical work group developed a very thorough and deliberative approach to evaluate, refine, and identify potential core stakeholder group participants and is described in detail the [Summer Flounder MSE Core Stakeholder Group Selection](#) document.

The technical work group tried to achieve a regionally balanced and diverse composition of stakeholders to cover the range and diversity of summer flounder fishery participants. A minimum number of representatives for each region: MA-CT, NY-DE, and MD-NC and by stakeholder type: for-hire (party and charter), private recreational (shore and vessel), commercial, recreational secondary market (bait and tackle, boat rental, marine trades, and tackle manufacturers), and “other” (academia, NGO, national/coastwide organization) were established. There was some difficulty in achieving the minimum targets for each region and stakeholder type, but the final list of the 13 members of the core stakeholder group is very diverse and represents the broad range of fishing perspectives (Table 1). Additional detail on the core group membership, including region and stakeholder representation, can be found in the [Summer Flounder MSE Core Stakeholder Group Selection](#) document.

³ The agenda, all meeting materials, and presentations for the three regional workshops can be found at: <https://www.mafmc.org/workshop/summer-flounder-mse>.

Table 1. Breakdown of the final MSE Core Stakeholder Group membership by region and stakeholder type.

Representation Type	# of Representatives
<i>Regional</i>	
MA-CT	5
NY-DE	6
MD-NC	2
<i>Stakeholder Type</i>	
For-Hire	5
Private Recreational	3
Commercial	1
Recreational Secondary Market	2
Other	2

The core stakeholder group will provide their input and help guide and inform the MSE through a series of three structured workshops. The first workshop, which was split into two sessions, was held via webinar on June 14⁴ and July 14⁵ which introduced members to the MSE and structured decision-making process, introduced the simulation model development with a focus on the bioeconomic model, and then development of a working definition of what the project should help answer and draft management objectives and alternatives (more on these outcomes below).

The second workshop will be a 2-day in-person workshop scheduled for late October/early November. The second workshop will review model development and preliminary results, evaluate and weight trade-offs between management objectives, and refine and adjust objectives and alternatives for continued analysis. The third workshop will also be a 2-day in-person workshop scheduled for March 2022. During this workshop, the core group will bring the entire process together and review “final” results, interpret the implications and trade-offs, and make recommendations to management.

In addition to attending and participating in the workshops, core group members are also asked to complete a variety of assignments prior to, and in between, each workshop. These “homework” assignments gives each core group member time to consider and develop their input, provides for a much more efficient and productive workshop to help accomplish all of the agenda objectives, and allows the MSE to continue to progress in between actual workshops.

Outcomes from Workshop 1, Session 1

During the first session of workshop 1, the primary focus of the discussion was spent developing a consensus decision statement to help identify the expected outcomes the MSE may address once complete. Establishing an agreed to decision statement is a critical first step in the process and provides a baseline and common understanding for the core group as to what the focus of the MSE will evaluate and consider. While the Council specified the broad goals and objectives for the MSE to evaluate strategies designed to minimize discards in the recreational summer

⁴ The agenda, all meeting materials, pre-recorded and in-workshop presentations for the June 14, 2021 Workshop 1, Session 1 webinar can be found at: <https://www.mafmc.org/council-events/2021/summer-flounder-mse-workshop-june14>.

⁵ The agenda and workshop presentations for the July 14, 2021 Workshop 1, Session 2 webinar can be found at: <https://www.mafmc.org/council-events/2021/summer-flounder-mse-workshop-july14>.

flounder fishery, there are a variety of issues and factors that need to be considered to help frame this topic. For example, while there are clear connections/linkages between the commercial and recreation sector and both fishing fleets will be included in the modeling efforts, there was feedback during the workshop and during public scoping to consider commercial sector metrics such as allocation, minimum size, or gear types within the MSE. However, the direction from the Council was clear that this MSE would focus on the recreational sector only and decisions regarding allocation or other commercial considerations will be made by the Council/ASMFC through different actions and management processes. Talking through these considerations and identifying the bounds of the MSE early in the discussion were very productive and helpful to frame the context of decision statement.

The decision statement developed by the core stakeholder group is as follows:

Decide how to meet the challenges of satisfying the diverse groups of anglers engaged in the recreational fluke fishery by addressing discarding, discard mortality, and data quality, while allowing for meaningful access to the fishery, accounting for temporal and spatial differences in recreational mode availability, considering the impacts of size and male to female take ratios, and achieving equity in recreational modes given the bounds of what is viable within the regulatory framework.

The core stakeholder group will use the decision statement to help frame and develop the management objectives and alternatives to be considered and evaluated through the MSE process. These topics were the focus of the second session of workshop 1.

Outcomes of Workshop 1, Session 2

In preparation for the second session, core group members were tasked with developing their lists of management objectives and alternatives to potentially be considered and evaluated during the MSE. The lists developed by the core group and the objectives and alternatives identified during the scoping survey and regional workshops were then compiled, categorized, and grouped into common themes to create a comprehensive set of objectives and alternatives (see Tables 2 and 3, respectively, in next section). These compiled lists were then sent to the core group, and they were tasked with developing an initial ranking for each objective and alternative.

During the workshop, the core group discussed each management objective in detail and identified potential attributes or metrics to help define or measure success in achieving the management objective. The same process was then followed for the alternatives where the core group discussed broader alternative categories (e.g., size limits, gear modifications) and specific options with each alternative category. The core group was unable to discuss in detail all of the alternatives and associated options during the second session workshop timeframe. However, these objectives and alternatives will continue to be refined and considered as the MSE process continues.

Draft MSE Objectives and Alternatives

Below for Council and Board consideration are the draft management objectives and strategies developed by the core stakeholder group and from public input received during scoping and the regional workshops. At this stage of the MSE process, we are not deciding if a specific alternative option (e.g., a slot limit from 15 – 19 inches with 4 fish possession limit) should be included in the list. Instead, the Council and Board should review the current list of objectives and alternatives to ensure they capture the overall scope and range of considerations the MSE

might evaluate – are there missing objectives or alternatives or should any of the currently identified objectives and strategies be removed? Not all objectives and/or alternatives listed will be modeled or be able to be fully evaluated during the project due to data and computation limitations, time constraints, and management priorities. After Council and Board approval, the technical work group and core stakeholder group will begin to further refine and prioritize the list of objectives and alternatives that will be analyzed and evaluated. The Council and Board will review and provide feedback on the refined list of objectives and alternatives in December 2021.

Management Objectives and Metrics

Management objectives are intended to help understand what a successful recreational fishery would look like that minimizes discards and discard mortality. Given the broad scope of the management objectives, sub-objectives and metrics or measurable attributes are also provided in order to help define the broad management objective and identify what can be measured to evaluate the success, or not, in achieving the desired objective. These objectives are specific to this MSE and are not connected to, nor would they replace, the summer flounder management objectives specified in the FMP.

Below are the top five draft management objectives, in priority order, identified by stakeholders concerning angler experience as well as biological, economic, and social sustainability:

1. Improve the quality of the angler experience
2. Maximize the equity of anglers’ experience
3. Maximize stock sustainability
4. Maximize the economic sustainability of the fishery
5. Maximize the sustainability of participation in the fishery

Table 2 provides sub-objectives and, if available, potential metrics and measurable attributes associated with each of the five management objectives. It should be noted that many of these objectives, particularly the sub-objectives, are inter-connected and changes and improvements in one objective area could affect the outcomes and performance of achieving objectives in another area. The MSE will allow the Council and Board to evaluate the trade-offs and connections across management objectives.

Table 2. Draft summer flounder MSE fundamental management objectives , sub-objectives, and example metrics/measurable attributes developed by the core stakeholder group and comprehensive stakeholder scoping and input.

Management Objective	Sub-Objectives	Metrics or Measurable Attributes
Maximize the quality of the angler experience	<ul style="list-style-type: none"> • Maximize the chances a trip produces a legal sized summer flounder • Maximize ratio of legal size to discarded size catches per trip • Maximize likelihood of trophy catch • Maximize likelihood of successful subsistence fishing 	<ul style="list-style-type: none"> • % of trips w/ legal size fish • keep/discard ratio per trip • % of trips with 10lb or 28” or larger catch • % of trips supplying a meal

	<ul style="list-style-type: none"> • Maximize likelihood of achieving bag limit per trip • Maximize management flexibility by customizing regulations by state • Maximize the quality of the recreational fishing experience • Minimize additional regulatory restrictions (e.g., changes to season or possession limit) • Maximize effective communication about the need for management • Minimize congestion on fishing grounds • Maximize ratio of fishing utility (food and enjoyment) to cost (equipment, license, etc.) • Maximize fishing site access • Minimize regulatory burden • Minimize likelihood of a truncated charter trip 	<ul style="list-style-type: none"> • % of trips w/ bag limit • Differential evaluation of regs • # of regulation changes per year • Survey response mgmt agreement • Angler interactions per trip • Utility/Cost ratio • Change in access locations • % chance bag limit achieved during trip
Maximize the equity of anglers' experience	<ul style="list-style-type: none"> • Minimize the differences in regulations between neighboring states • Minimize regulatory uncertainty • Minimize changes in regulations from year to year (maximize regulatory stability) • Minimize rate of regulatory changes (1 large change better than many small changes) • Maximize recreational fishery participation in all sectors (e.g., shore, private boat, for-hire) • Minimize the differences in retention rates by fishing method (e.g., shore, private vessel, for-hire) • Minimize the number of anglers unable to retain legal sized summer flounder 	<ul style="list-style-type: none"> • # of different regulations • Survey response mgmt process understanding • # of different regulations over time • % or # of participants by sector over time • Retain/discard ratio by mode over time • Change in trips with keeper fish
Maximize stock sustainability	<ul style="list-style-type: none"> • Minimize negative biological impacts to the summer flounder stock <ul style="list-style-type: none"> ○ Minimize discard mortality ○ Minimize discards per trip ○ Minimize mortality rate • Minimize risk of overfishing and risk of stock becoming overfished • Maximize regulatory compliance • Minimize harvest of female summer flounder • Maximize large female abundance • Maximize spawning stock biomass 	<ul style="list-style-type: none"> • Change in population size, length/age, growth • Change in mortality rate • # of discards/trip • Total mortality • % overfished in projection • # of violations/year • Female stock size/Female fishing mortality • Female # and size at age • Changes in SSB
Maximize economic sustainability	<ul style="list-style-type: none"> • Minimize the regulatory burden on recreational businesses (e.g., for-hire, bait and tackle, boat rentals) 	<ul style="list-style-type: none"> • Cost and % time devoted to compliance

	<ul style="list-style-type: none"> • Consider the open seasons for other fisheries (e.g., black sea bass) • Maximize season length • Increase/stabilize the number of recreational businesses participating in fishery 	<ul style="list-style-type: none"> • Overlap w/ other fisheries, # days in season • # of days in season • # of rec businesses, permits, boat reg. over time
Maximize fishery sustainability	<ul style="list-style-type: none"> • Maximize entry (especially of youth) into the fishery • Increase outreach, promotion, and communication of recreational fishing opportunities 	<ul style="list-style-type: none"> • # of new participants, # of permits per year •

Alternatives and Strategies

Alternatives and specific strategies identified here would consist of potential management actions (e.g., slot limits, gear requirements, reporting requirements etc.) that should be evaluated in the MSE to determine if management objectives and specified metrics were successfully achieved. These represent the recreational management options and tools the Council and Board might select to implement at the end of the MSE. Given the diversity and extensive number of potential alternatives that could be considered, similar alternative approaches (e.g., size limit considerations) identified by the core group and stakeholders were grouped into categories and specific options are provided for each alternative category (Table 3).

As noted earlier, the goal at this stage of the MSE process is not to focus on a preference for specific alternative options, but to determine if the range of alternative types and options provided here cover the scope of alternatives that could be considered. The list of potential alternatives and alternative options will be further refined and prioritized to develop a more manageable range of alternatives for evaluation and analysis.

Table 3. Draft summer flounder MSE alternatives and options developed by the core stakeholder group and comprehensive stakeholder scoping and input.

Alternative Category	Potential Alternative Options
Size Limits	<ul style="list-style-type: none"> • Combinations of minimum, maximum, or total trip size limits <ul style="list-style-type: none"> ○ bag size ranges: <ul style="list-style-type: none"> ▪ Minimum options: 15, 16, 17, 18 inches ▪ Maximum options: 20, 21, 22, 23, 24 inches ○ Trip (total/cumulative) length limit: 54 - 128 inches ○ No limits • Modify limits by sex ratio at length
Possession Limits	<ul style="list-style-type: none"> • Total per trip: 3 - 6 • Total per season: ## • Total by length: #/length • Total by sex: #/sex • Number of tags: (i.e., limited by tags owned) • Total per boat: #/vessel <ul style="list-style-type: none"> ○ Catch sharing • Bonus/Allowance:

	<ul style="list-style-type: none"> ○ Injury exception ○ Purchased tags ○ Reward from incentive program(s)
Season Length	<ul style="list-style-type: none"> ● Combinations of start and end dates <ul style="list-style-type: none"> ○ Start: Jan 1, ... ○ End: Dec 31, Oct 1, Sept 1, ... ○ Within week closure: e.g. closed Tues. - Thurs. ○ Match with similar species (e.g., sea bass, blackfish) ● Multiple seasons w/ different bag/size limits <ul style="list-style-type: none"> ○ e.g., 1/trip limit year round, ... ○ e.g. closed season (protect reproduction) ● Derby style <ul style="list-style-type: none"> ○ Season closes when quota is reached
Discard Allowance or Limits	<ul style="list-style-type: none"> ● None ● Limited per trip: 1-## ● Limited per season: 1-## ● Limited per length: 1-## ● Unlimited ● Banned or allowances for: <ul style="list-style-type: none"> ○ Injured fish ○ Gut hooked ○ Retention time ○ Special tag
Gear/Tackle Regulations	<ul style="list-style-type: none"> ● Hook size: e.g., 5/0 ● Hook type: e.g., circle only ● Method: e.g., hook and line only ● Bait type: e.g., no gulp bait ● Require de-hooking device ● Night fishing: <ul style="list-style-type: none"> ○ Lumen regulation
Mode Specific Regulations	<p>Mode considerations:</p> <ul style="list-style-type: none"> ● Shore <ul style="list-style-type: none"> ○ Different size limits ○ Expand exemption locations ● Offshore ● For-hire <ul style="list-style-type: none"> ○ Ban multiple day trips targeting a single assemblage ● Charter ● Party ● Private boat owner ● Hook and line ● Giggling ● Spearfishing
Spatial Considerations	<p>Spatial scales:</p> <ul style="list-style-type: none"> ● Full region ● States

	<ul style="list-style-type: none"> • Regions (across states) • Regions (within states) • Protected/closed areas (e.g., protect juveniles)
Dynamic Regulations	<ul style="list-style-type: none"> • Time scales: <ul style="list-style-type: none"> ○ Multiple years ○ Annual ○ With-in season <ul style="list-style-type: none"> ▪ Apply more restrictive regulations to regions/sectors with more liberal regulations first • Trial-framework: <ul style="list-style-type: none"> ○ Keep effective, remove ineffective regulations
Licensing	<ul style="list-style-type: none"> • Out-of-state licensing: <ul style="list-style-type: none"> ○ None ○ Quota ○ More costly • Options: <ul style="list-style-type: none"> ○ Trophy license ○ Subsistence license • Price • Reporting
Recreational Fishing Enhancements	<ul style="list-style-type: none"> • Build public piers • Open additional sites to fishing • Youth programs: <ul style="list-style-type: none"> ○ Separate license ○ Separate regulations ○ Additional incentive program(s) • New participant programs: <ul style="list-style-type: none"> ○ Separate license ○ Separate regulations ○ Additional incentive program(s)
Enforcement	<ul style="list-style-type: none"> • Staff levels <ul style="list-style-type: none"> ○ Extend AmeriCorps Watershed Ambassador program • Penalties <ul style="list-style-type: none"> ○ Gear confiscation • Reporting system: <ul style="list-style-type: none"> ○ Electronic ○ Observer program ○ Application (e.g., ebird or i-angler, blueline tilefish as ex.) ○ Website ○ Surveys ○ Physical forms and drop boxes <ul style="list-style-type: none"> • At marinas • On vessels ○ With or without incentives ○ Mandatory or not • Citizen violation reporting <ul style="list-style-type: none"> ○ With reporting system

	<ul style="list-style-type: none"> ○ With incentives
Education Program to Encourage Adherence to Best Practices	<ul style="list-style-type: none"> ● Outreach program ● Website ● Link with licensing: <ul style="list-style-type: none"> ○ Passive voluntary ○ Active voluntary ○ Licensing test ● App
Habitat Management	<ul style="list-style-type: none"> ● Artificial reefs ● Regulate pollution ● Beach replenishment ● Dredging
Data Collection	<ul style="list-style-type: none"> ● MRIP: <ul style="list-style-type: none"> ○ As is ○ Augmented MRIP ○ MRIP Replacement ● Tagging Program: <ul style="list-style-type: none"> ○ Tag releases ○ Incentive for reporting tags ● Volunteer angler surveys
Regulate Forage Fish Status	<ul style="list-style-type: none"> ● Regulate: <ul style="list-style-type: none"> ○ Menhaden ○ Squid ○ Shrimp

Next Steps, Anticipated Timeline and Other Considerations

To date, the MSE project has been progressing on schedule and the proposed next steps and anticipated timeline remain very similar to what was presented to the Council in April (Table 4). The technical work group will meet in September and take the feedback from the Council, Board, and core stakeholder group regarding management objectives and alternatives and will provide direction to the modeling sub-group on initial list of alternatives to begin to model and analyze. This will not be an exhaustive list but will identify some initial priorities to focus the analysis in order to show the core group how the modeling structure works and the types of results it can produce during the second workshop in the fall.

It was originally proposed that after each core stakeholder group workshop, the Council’s Ecosystem and Ocean Planning (EOP) and Summer Flounder, Scup, and Black Sea Bass Committees, along with a sub-set of members from the Board would meet to review their feedback and input provided during these workshops. The intent of this step was to get some initial feedback and directions from a smaller group of managers to potentially help improve the efficiency and outcomes during the joint meetings. However, after reviewing the membership of the EOP and Summer Flounder, Scup, and Black Sea Bass Committees and likely participants from a sub-group of the Board, this would include nearly the entire Council and much of the Board – defeating the purpose of meet with a smaller group of managers. Therefore, to minimize the number of meetings, reduce duplication, and lessen the amount of planning and coordination,

it was decided to skip this step and focus the discussion and feedback for the joint meetings when everyone was together. This approach will still allow for an iterative process with regular check-ins to ensure the technical work group is receiving input from stakeholders and managers to make sure project goals, objectives, and expectations are being met. The next check-in would occur in December 2021 following the core stakeholder workshop in late October/early November. Leadership from the EOP and Summer Flounder, Scup and Black Sea Bass Committee and Board continue to be copied on all technical work group correspondence and invited to attend and participate in all work group calls to ensure management is informed of all activities.

It is anticipated the final results and management alternatives will be presented to the Council and Board for consideration in April/May 2022. Any outcomes and decisions, depending on their scope, could potentially be implemented for the 2023 recreational season as the Council and Board begin specification and regulation review and development in August 2022.

Table 4. Anticipated timeline of activities associated with completion of the EAFM summer flounder management strategy evaluation project.

Task/Activity	Timeframe (subject to change)
Finalize technical work group membership and initial meeting	May 2020
Kick-off webinar and mock workshop with Council and ASMFC advisory panels (https://www.mafmc.org/council-events/2020/eop-sfsbsb-ap-meeting-sept22)	September 2020
Stakeholder scoping feedback form (https://www.mafmc.org/newsfeed/2021/summer-flounder-mse-comment-opportunity)	January 2021
Regional MSE workshops (https://www.mafmc.org/newsfeed/2021/council-to-hold-virtual-summer-flounder-management-strategy-evaluation-mse-workshops)	March – April 2021
Finalize core stakeholder group participants; core stakeholder group workshop 1 (session 1 and 2) and Council/Board meeting to develop objectives/performance metrics/alternatives; data synthesis, initial model development and linking existing models	May – August 2021
Simulation testing of management strategies; model refinement as necessary; deliver interim results at second stakeholder workshop and Council/Board meeting	September – December 2021
Continue with MSE analysis; third stakeholder workshop to review draft final results; refine models and results, as needed	January 2022 – March 2022
Review final results; Council and Board considers potential management alternatives and action to address recreational summer flounder discards	April/May 2022

Intersection with the Recreational Reform Initiative/Harvest Control Rule

During the August meeting, the Council and ASMFC Policy Board will be meeting jointly to discuss the Harvest Control Rule (HCR) framework/addendum⁶. This action is part of a larger Recreational Reform Initiative that considers a range of topics and issues aimed to improve the management of recreational fisheries. The HCR is a more holistic approach that would “use predetermined recreational management measure ‘steps’ associated with different biomass levels and stock indicators”⁷.

While the HCR and the summer flounder MSE are distinct projects designed to address a specific issue(s), both are intended to improve recreational fisheries management and the implementation of measures that provide stock and fishery stability and sustainability. Given these inter-connected management goals, there is an opportunity to use the process, analysis, and outcomes from each project to help inform one another. For example, the potential management measures devised for the different “steps” of the HCR could be evaluated in the MSE framework to understand the potential discard implications associated with different management measures (at least for summer flounder). In addition, the bio-economic model currently under development for the MSE is also being considered as one potential model for use by the FMAT/PDT in developing recreational measures associated with the different HCR “steps”. The FMAT/PDT is also recommend re-evaluating any management measures that are implemented to ensure they continue to achieve the desire goals. The MSE model(s) could be used in the future to help in this evaluation process.

The Council and Board should consider and discuss these potential intersections, project timelines, and how best utilize the results and information from each project to improve recreational management.

⁶ See the August 2021 Council briefing book for additional information on the Harvest Control Rule framework/addendum at: <https://www.mafmc.org/briefing/august-2021>.

⁷ From Council staff briefing memo to Council and Policy Board for the June 2021 Council meeting - <https://www.mafmc.org/briefing/june-2021>.