Mid-Atlantic Fishery Management Council
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Michael P. Luisi, Chairman | P. Weston Townsend, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: May 25, 2023

To: Council

From: Karson Cisneros, Staff

Subject: Joint Sturgeon Bycatch Framework Action

On Wednesday, June 7, the Council will review and approve the range of alternatives to be considered for the Monkfish and Dogfish Joint Framework to reduce the bycatch of Atlantic Sturgeon. This joint action with the New England Fishery Management Council (NEFMC) was initiated in response to recommendations made by the Atlantic Sturgeon Bycatch Working Group, as described in the Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large Mesh Gillnet Fisheries. The NEFMC will review and approve the range of alternatives at their June 27-29 Council Meeting. Materials listed below are provided for the Council's consideration of this agenda item.

1) MAFMC and NEFMC staff memo on alternative considerations dated May 24, 2023
2) Joint Monkfish and Spiny Dogfish Committee meeting summary from May 17, 2023
3) Joint Monkfish and Spiny Dogfish Advisory Panel meeting summary from May 16, 2023
4) Draft Alternatives document from May 9, 2023
5) FMAT/PDT meeting summary from April 21, 2023

For additional background information on this action, see the Sturgeon Bycatch Framework Action Page.

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Michael P. Luisi, Chairman | P. Weston Townsend, Vice Chairman
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: May 24, 2023

To: Dr. Chris Moore, Executive Director

From: Karson Cisneros, MAFMC Staff, Jenny Couture and Robin Frede, NEFMC Staff

Subject: Considerations for the Range of Alternatives for the Sturgeon Framework Action

Outline of the Range of Alternatives as Recommended by the Joint Dogfish and Monkfish Committee

The Joint Committee (Committee) did not recommend removal of any of the alternatives included in the FMAT/PDT draft alternatives document provided to the Committee as briefing materials. They added several options that expand the range of alternatives. Based on these additions, the full range of alternatives as recommended by the Committee is outlined below.

Spiny Dogfish Action

Alternatives would be applied to either 1) mesh size 7 inch or greater only or 2) apply to mesh 5 inch and greater (to the extent possible separating out by mesh size category).

The range of alternatives includes a variety of time/area restrictions or closures to address sturgeon bycatch hotspot areas.

Restriction options to be applied to selected time and area options

1. Soak time restrictions
    a. No overnight soaks
    b. Maximum of 24 hour soaks
    c. Maximum of 48 hour soaks
    d. Maximum of 72 hour soaks
2. Closures

Area options

1. Statistical area groups
    a. NJ hotspot: 612, 614, and 615
    b. DE/MD/VA hotspots: 621, 625, and 631

2. Smaller areas within statistical areas identified in 1a and 1b, using 10-minute squares to encompass NJ, DE, MD, and VA hotspots (estimating 6-9 miles offshore)
3. Smaller areas within statistical areas identified in 1a and 1b, using straight lines that approximate the shoreline to encompass NJ, DE, MD, and VA hotspots (estimating 6-9 miles offshore)

Time options

1. NJ hotspot
    a. November 1 – December 31
    b. April 1- 30
    c. For closures: 1, 2, 3, or 4 week periods within timeframes in 1a and 1b
2. DE/MD/VA hotspots
    a. December 1 – January 31
    b. March 1-31
    c. For closures: 1, 2, 3, or 4 week periods within timeframes in 2a and 2b

Monkfish Action

Alternatives would be applied to vessels using a Monkfish day-at-sea (DAS) using gillnet gear.

Restriction options to be applied to selected time and area options

1. Gear restrictions: low profile gillnet as defined in draft alternatives document
    a. Only applicable to NJ hotspot
2. Soak time restrictions
    a. Maximum of 48 hour soaks
    b. Maximum of 72 hour soaks
3. Closures

Area options

1. Statistical area groups
    a. Southern New England: 539
    b. NJ hotspot: 612, 614, and 615
2. Smaller areas within statistical areas identified in 1a and 1b, using 10-minute squares to encompass hotspots (estimating 6-9 miles offshore)
3. Smaller areas within statistical areas identified in 1a and 1b, using straight lines that approximate the shoreline to encompass hotspots (estimating 6-9 miles offshore)

Time options

1. Southern New England
    a. May 1-31
    b. June 1-30
    c. For closures: 1, 2, 3, or 4 week periods within timeframes in 1a and 1b
2. NJ hotspot
    a. December 1-31
    b. May 1- 31
    c. For closures: 1, 2, 3, or 4 week periods within timeframes in 2a and 2b
    d. For low profile gear in NJ hotspot (e.g., not soak time restriction): year-round

Committee Meeting Follow-Ups

Staff reached out to Coast Guard and OLE representatives from both Councils for feedback on the enforceability of several of the options. Any feedback received from enforcement before the June Council meeting will be presented under this agenda item.

Staff received observer data by mesh size category for spiny dogfish targeted trips and analyzed VTR data to better address mesh size questions (described below).

Spiny Dogfish Considerations

As described in more detail in the Committee meeting summary, the 2021 Biological Opinion (BiOp) defines 'large mesh' as ≥ 7 inches, and GARFO has clarified that there is not a requirement to reduce bycatch in mesh < 7 inches. However, the Action Plan states the exclusion of measures for smaller mesh "is related primarily to the language of the 2021 Biological Opinion and its requirements rather than a belief that interactions between them and Atlantic sturgeon should not be considered now or in the future. Reductions in these interactions would have a positive impact on Atlantic sturgeon in the region."

Observer data on Atlantic sturgeon takes by mesh size in the spiny dogfish fishery from 2015-2022 are shown in Table 1. Based on these data, 98% of the sturgeon takes in trips listing spiny dogfish as a targeted species ("target 1" or "target 2") occurred on hauls with mesh sizes less than 7 inches.

Based on an evaluation of gillnet VTR data from 2015-2022, 88% of spiny dogfish landings occurred with a mesh size of less than 7 inches (Figure 1). Of the 12% of dogfish VTR landings that occurred using a mesh size ≥ 7 inches, the majority of spiny dogfish were landed in Massachusetts and Rhode Island, which were not identified as sturgeon bycatch hotspot regions (Table 2). Spiny dogfish trips based on VTR data were defined as trips where spiny dogfish made up at least 40% of the total landings and trips where at least 1,000 lbs of dogfish were landed.

Table 1. Total Atlantic Sturgeon takes by gillnet mesh size on observed spiny dogfish trips (target 1 or target 2) based on observer data summed across 2015-2022.

	Mesh Size (inches)	
Year	**≥5 to <7**	**≥7**
2015	45	0
2016	70	5
2017	23	0
2018	57	0
2019	66	0
2020	7	0
2021	5	0
2022	26	0
Total	**299**	**5**
Source: Observer data, accessed May 2023.		

Figure 1. Spiny dogfish gillnet landings by mesh size based on VTR data summed across 2015-2022.

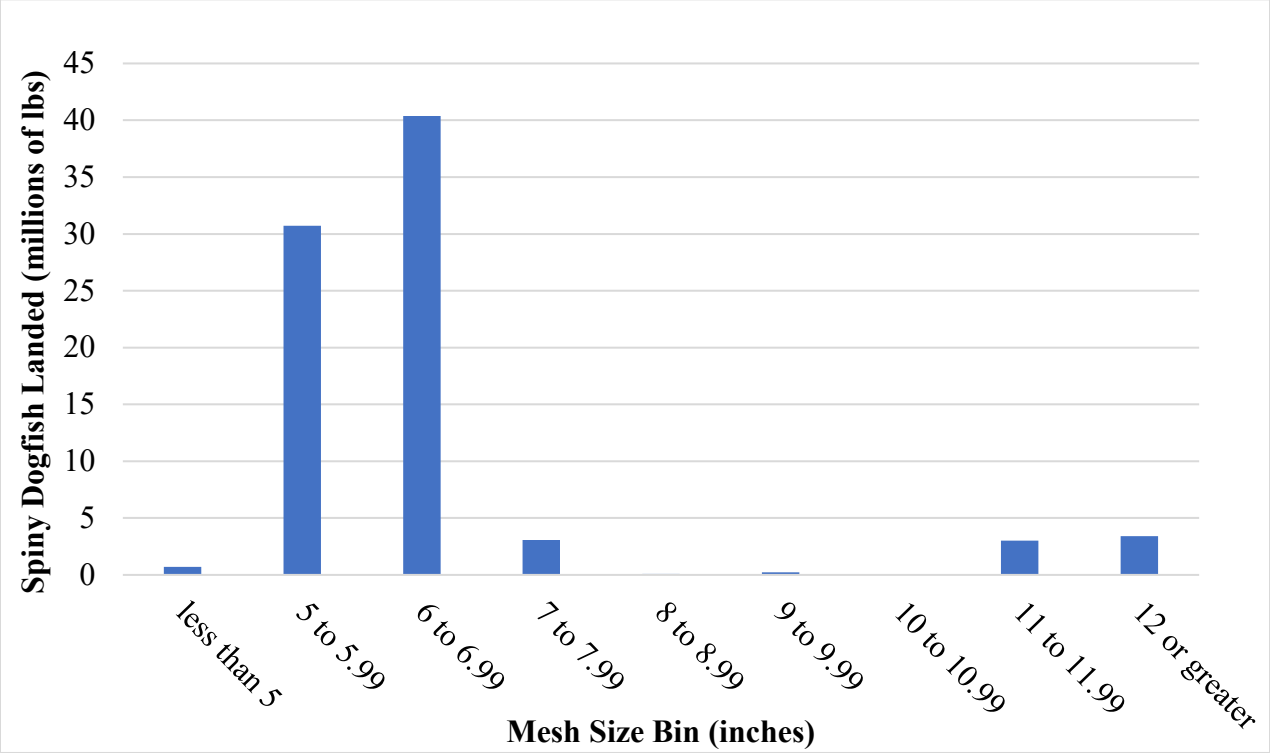

Table 2. Spiny dogfish gillnet trips and landings summed across 2015 - 2022 by region for trips that used mesh size of ≥ 7 inches based on VTR data.

Mesh size ≥ 7 inches		
State	**# of Trips**	**Dogfish Landed (lbs)**
ME	C	C
NH	722	1,155,627
MA	2,249	7,816,760
RI	120	408,569
CT	C	C
NJ	116	347,686
MD	21	53,007
VA	8	25,228
Notes: 'C' indicates confidential data comprised of < 3 trips. *Source:* VTR data, accessed May 2023.		

Joint MAFMC and NEFMC Staff recommendations

Spiny Dogfish Action

- The timeline for this framework action is bound by the ESA requirement to reduce sturgeon bycatch in large mesh gillnet fisheries by 2024. Unlike for monkfish, low profile nets have not been tested for sturgeon bycatch in the spiny dogfish fishery. If dogfish is removed from this framework action, the Councils can still address sturgeon bycatch in this fishery on a timeline that is not bound by the BiOp. This would allow for further research such as the use of EFPs to test low profile nets and data loggers that could help enforce soak times.
- A proposed rule to modify the Atlantic Large Whale Take Reduction Plan to reduce the risk of entanglement to endangered right whales is anticipated in late 2023 or early 2024. Restrictions to gillnet fisheries in the Mid-Atlantic region including all meshes for spiny dogfish are anticipated in this proposed rule and may achieve Atlantic sturgeon bycatch reduction.
- Staff recommend that the Councils either 1) remove dogfish from the framework action given that the fishery mainly operates at mesh sizes not included in the prescribed ESA BiOp requirement, or 2) apply the dogfish alternatives to mesh sizes 5 inches or greater to address sturgeon bycatch in the dogfish fishery. Given the mesh sizes used in the fishery and the observed takes analysis herein, applying dogfish alternatives only to a mesh size of 7 inches or greater would likely not apply to the dogfish fishery in the hotspot regions or result in sturgeon bycatch reduction.

Framework Action Alternatives for both FMPs

- Given the timeline limitations of this action, staff recommend that the Councils remove any alternatives from consideration that are deemed problematic or unenforceable by enforcement representatives before further analysis takes place. This feedback is anticipated by the June Council meetings.
    - For the two methods of drawing smaller areas around hotspots (Area options 2 and 3 under each FMP), staff recommend selecting whichever method is deemed most enforceable. These two options are trying to achieve the same goal of smaller areas within statistical areas; however the Committee did not have feedback from enforcement at the time of their meeting.

MEETING SUMMARY

Joint Monkfish and Dogfish Committee

Webinar
May 17, 2023

The Monkfish and Dogfish Committee (committee) met jointly on May 17, 2023, via webinar to discuss: 1) the Final Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large-Mesh Gillnet Fisheries including a review of the draft alternatives developed by the Sturgeon Bycatch Fishery Management Action Team (FMAT)/Plan Development Team (PDT); 2) any additional data or information needs to help inform the range and development of alternatives; and 3) Other business.

MEETING ATTENDANCE:
Monkfish Committee: Libby Etrie (Chair), Eric Hansen, Kelly Whitmore, Scott Olszewski, John Pappalardo, *Alan Tracy, Pete Christopher, Peter Hughes (Vice-Chair), *Dan Farnham, Paul Risi

Dogfish Committee: Chris Batsavage, *Dan Farnham, Skip Feller, Emily Keiley, Bob Beal, Nichola Meserve (Vice-Chair), Mark Alexander, Rick Bellavance, Dan Salerno, *Alan Tracy

* Indicates membership on both Committees
Note: The Monkfish Committee Chair chaired this meeting.

Staff: Robin Frede (NEFMC), Karson Cisneros (MAFMC), Jenny Couture (NEFMC)

In addition, approximately 7 members of the public attended. Also in attendance were: John Almeida, Cynthia Ferrio, Lynn Lankshear, Danielle Palmer, and Spencer Talmage (GARFO); Bridget St. Amand and Jason Boucher (NEFSC); James Boyle and Toni Kerns (ASMFC); Eric Reid (NEFMC Chair); Jason Didden (MAMFC staff); and Emily Bodell, Connor Buckley, Jamie Cournane, Rachel Feeney, Angela Forristall, Chris Kellogg, David McCarron, and Janice Plante (NEFMC staff).

SUPPORTING DOCUMENTATION: Discussions were aided by the following documents and presentations: **(1)** Meeting overview memo from Monkfish Committee Chair; **(2)** Agenda; **(3)** Presentation, Council Staff; **(4)** Draft Alternatives; **(5)** Sturgeon Bycatch Fishery Management Action Team/Plan Development Team meeting summary, Apr. 21, 2023; **(6)** Joint Monkfish and Dogfish Advisory Panel consensus statements/discussion – *tentative based on May 16th discussion;* **(7)** Final Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large-Mesh Gillnet Fisheries; and **(8)** Background - bycatch reduction studies.

The meeting began at approximately 9:32 a.m.

KEY OUTCOMES:

- The Dogfish Committee recommended the following for dogfish fishery measures for the range of alternatives:

    - The FMAT/PDT develop and analyze alternatives for dogfish under two options: 1) apply to mesh size 7-inch or greater only and 2) apply to mesh 5-inch and greater (to the extent possible separating out by mesh size category).

    - Include in the range of alternatives for dogfish for area-based measures (NJ hotspot statistical areas and DE/MD/VA statistical areas) three options:
        1) by statistical area group,
        2) by 10-minute square (as distance from shore, e.g., approximating 0-6 or 0-9 mile (sub-options)), and
        3) straight line that approximates shoreline at (e.g., 6 or 9 miles from shore (sub-options)).

      Goal of encompassing hotspots.

    - Add options for dogfish for soak time limits for 48 hours and 72 hours.

    - Add alternatives for dogfish for time-area closures in one-week intervals up to four weeks for each of the three area-based options (NJ hotspot statistical areas and DE/MD/VA statistical areas):
        1) by statistical area group,
        2) by 10-minute square (as distance from shore, e.g., approximating 0-6 or 0-9 mile (sub-options)), and
        3) straight line that approximates shoreline at (e.g., 6 or 9 miles from shore (sub-options)).

      Goal of encompassing hotspots.

- The Monkfish Committee recommended the following for monkfish fishery measures for the range of alternatives:

    - Include in the range of alternatives for monkfish for area-based measures (NJ hotspot statistical areas and SNE hotspot statistical area) three options:
        1) by statistical area group,
        2) by 10-minute square (as distance from shore, e.g., approximating 0-6 or 0-9 mile (sub-options)), and
        3) straight line that approximates shoreline at (e.g., 6 or 9 miles from shore (sub-options)).

      Goal of encompassing hotspots.

    - Add options for monkfish for soak time limits for 72 hours.

- Add alternatives for monkfish for time-area closures in one-week intervals up to four weeks for each of the three area-based options (NJ hotspot statistical areas and SNE statistical area):
    1) by statistical area group,
    2) by 10-minute square (as distance from shore, e.g., approximating 0-6 or 0-9 mile (sub-options)), and
    3) straight line that approximates shoreline at (e.g., 6 or 9 miles from shore (sub-options)).

  Goal of encompassing hotspots.

- The joint Monkfish and Dogfish Committee recommended to the Councils that the Enforcement Committee(s) provide input on draft alternatives, specifically using soak time limits for managing gillnet fisheries and use of more refined areas beyond statistical area for time-area alternatives.

OPENING REMARKS: INTRODUCTIONS, APPROVAL OF AGENDA

The Chair introduced the joint monkfish and spiny dogfish committee (Committee), welcomed attendees, and sought approval of the agenda. There were no agenda changes. The Chair reviewed the process and tentative timeline for this joint meeting given this is a joint action being developed by the New England and Mid-Atlantic Fishery Management Councils.

AGENDA ITEM #1-2: Joint Sturgeon Action, Council Staff (NEFMC and MAFMC)

Council staff briefed the joint Committee on the background of the action including an overview of the 2021 Biological Opinion, the formation of the Atlantic Sturgeon Bycatch Working Group, the sturgeon hotspots for federal large mesh gillnet fisheries, the definition of low-profile gillnet gear, and an overview of the action objectives. Staff also provided an overview of the draft alternatives developed by the FMAT/PDT including time-of-year and/or area restrictions for federally permitted vessels off Southern New England (monkfish-only), New Jersey (monkfish and spiny dogfish), and Delaware/Maryland/Virginia (dogfish-only). Draft measures included requirement of low-profile gillnet gear for the monkfish fishery and soak time duration for the monkfish and dogfish fisheries. These measures are not mutually exclusive. Monthly trends in bycatch and soak time data were also provided for context.

Measures discussed but not included in the draft alternatives were also briefly discussed. The FMAT/PDT also emphasized that this action is not able to address state water issues in this action and that a complementary state plan for dogfish (though not for monkfish) is anticipated.

Staff also provided a summary of joint Monkfish and Dogfish Advisory Panel (AP) input on the draft alternatives.

Questions and Comments on the Presentation:

The chair asked the agency to clarify if this action needs to address measures for mesh smaller than 7 inches. GARFO staff responded that based on the 2021 Biological Opinion (BiOp) definition of 'large mesh' there is not a requirement to reduce bycatch in mesh < 7 inches, but there are interactions in smaller mesh. They noted the sturgeon bycatch working group recognized that the definition of large mesh came from the BiOp but doesn't match up with other definitions of large mesh, resulting in a

mismatch between what is happening with sturgeon bycatch and the definition used for the bycatch reduction requirement. The Endangered Species Act (ESA) requirement to minimize bycatch to the extent possible without significantly altering the fisheries means that GARFO will have to evaluate whether the action the councils take does minimize bycatch to the extent possible in large mesh gillnet fisheries, and that otherwise NMFS might need to take action.

GARFO staff also clarified the action plan maps aren't representative of interactions in only 7 inches or greater mesh given how the observer data was analyzed and that the purpose of the action plan maps is to help the councils identify where to focus measures. They reiterated the requirement is to reduce bycatch in 7-inch or greater mesh but that in the observer data, trips targeting spiny dogfish have the highest interactions with sturgeon compared to other target species, which is why the action plan recommendation included the dogfish fishery. In response to a question, council staff explained that the additional updated observer data on sturgeon takes that were examined included all trips targeting spiny dogfish and does not filter out by mesh size or any state waters trips. A committee member asked if they can see observer data split by mesh size and state vs. federal waters. GARFO staff initially said this could not be done, but later corrected to say this is something the FMAT/PDT can examine in the observer data. The committee member also asked about the hotspot in Southern New England (SNE) showing low interactions compared to other regions and the AP not wanting to address this area, and whether the agency will have to implement measures in this region if the councils don't include them. GARFO staff answered that GARFO will have to evaluate this but not addressing Southern New England might be reasonable given that including the New Jersey hotspot with the highest interactions might address the requirement to minimize bycatch. Another committee member said that regardless of what mesh size is included in the action, that enforcement likely will need to be done by mesh size rather than target species since enforcement representatives won't be able to tell dogfish nets vs. nets targeting other species, and this will need to be added to the language in the alternatives.

A committee member asked if federally permitted fishermen would be held to federal measures in state waters. The concern is that they could switch back and forth between permits to avoid federal restrictions which would be counterproductive. A GARFO representative on the committee explained the requirement that anyone issued a federal permit is subject to the more restrictive measures while fishing in state waters. MAFMC staff noted the language would need to be expanded beyond 3-6 miles in order to encompass state waters (referring to an idea suggested by the AP). The committee member referenced enforcement guidelines in the NEFMC operations handbook, which discourage the use of distance from shore as a boundary for measures due to enforcement challenges, and asked for additional information on data loggers referred to in the draft alternatives for soak time limits. There has been some testing of data loggers for recording soak time, but the FMAT/PDT needs to look into this further to understand whether they would be ready for implementation and have discussions with enforcement groups on feasibility. Another committee member asked if the FMAT/PDT can look at a different approach for refining areas by ten-minute squares, which might be more enforceable than measures applied by statistical area or distance from shore. The NEFMC Enforcement Committee recommends square polygons for ease of enforcement but also cautions against areas being too small. Transiting across areas was also noted as an enforcement consideration.

A committee member noted the AP discussion questioning the use of the low-profile gear and asked if there has been enough research to say it's effective and not going to overly reduce monkfish catch. Staff explained that the fisherman who has participated in most of the studies is on the Monkfish AP but was not on the meeting yesterday and the discussion was missing his perspective, though he did provide input at the FMAT/PDT meeting. The research studies show mixed results for reducing target catch, as there was not a reduction for the study vessel operating off New Jersey but there was for the vessel fishing off New York. Advisors yesterday were generally not in favor of the low-profile gear. The committee

member said he is concerned about requiring use of the low-profile gear if it works for some and not others. The chair offered that the FMAT/PDT could provide additional information on the low-profile gear including cost information at later stages of developing the alternatives.

Discussion:

The chair reiterated the objective of the meeting to get a range of alternatives to bring to the June Council meetings. The discussion focused on dogfish measures first and then monkfish.

Spiny Dogfish

The committee first discussed the mesh sizes used in the dogfish fishery. A committee member commented that to their knowledge, and based on AP comments, the dogfish fishery primarily uses 5 to 6-inch mesh. They added that the full range of mesh sizes for the dogfish fishery would need to be considered in the hotspot areas in order to address sturgeon bycatch, rather than focusing on 7 inches or greater per the mandate from the BiOp. If measures were only applied to mesh sizes of 7 inches or greater, the measures would likely not apply to the dogfish fishery, particularly in the southern hotspots. Another committee member asked that given the definition of large mesh, why is dogfish on the table for consideration at this time? A GARFO representative reiterated that the BiOp requires addressing the large mesh gillnet fishery defined as 7 inches or greater mesh and thus the committee does not need to consider mesh sizes smaller than that. The Councils have the discretion on whether to include smaller mesh sizes. Given this discussion, a committee member suggested including the smaller mesh sizes that include the dogfish fishery for now, so that the action is not limited at this time. This committee member voiced concern that down the line, not addressing bycatch in the dogfish fishery, may backfire if GARFO decides that not enough was done and steps in with their own action. The committee chair asked GARFO if the analysis showed that the dogfish fishery uses less than 7-inch mesh, and therefore the BiOp requirement is not applicable, whether it would be valid to not apply measures. GARFO clarified that this would be valid not to include smaller mesh sizes since that is not required in the BiOp.

Committee members also noted that according to the action plan (p. 62), a very large part of the sturgeon bycatch occurs in the dogfish fishery. They noted that more information is needed on the range of mesh sizes used in the dogfish fishery. One member added that in the southern mid-Atlantic area there are other smaller mesh fisheries that use smaller than 5-inch mesh that should not be included in the measures, therefore felt it was appropriate to focus on 5 inches or greater mesh sizes in order to distinguish the dogfish fishery.

The Committee also discussed the recommendation from advisors to address smaller areas for restrictions in order to hone in on the hotspot areas. Several committee members suggested the FMAT/PDT should analyze areas that capture the 3-6 or 3-9 miles offshore for more discrete regions. A committee member added that the hotspot areas are within state and federal waters and therefore should include 0-6 or 0-9 miles and federal permit holders would be held to these restrictions in both state and federal waters. The intent would also be that the Commission would be able to implement these areas in their complementary dogfish plan.

Members suggested looking at 10-minute squares or a straight line that mirrors the coastline for developing restriction area alternatives, given that defining a restriction area by distance from shore was not recommended in guidelines produced by enforcement entities included in the NEFMC operations handbook. A committee member added that 10-minute squares that capture a hotspot could produce a jagged edge, so the FMAT/PDT may be better off drawing a straight line parallel to the shore. They added

that drawing straight lines may be preferred for enforcement. This can also help avoid shipping lanes, as was recommended by a committee member. Committee members emphasized the need for feedback from enforcement on these methods for developing restriction areas before the FMAT/PDT fully analyzes each approach.

Members of the committee were also in favor of adding more time options for soak time restrictions, as recommended by the advisors. They recommended adding longer soak time options for dogfish of 48 and 72 hours. A representative from GARFO on the committee raised a general concern over the enforceability of soak time restrictions, particularly for 24 hours or higher. They were unclear on how that would be enforced effectively. Given this concern, they noted it may be worth including consideration of small time-area closures. Data loggers were discussed as a tool for enforcing soak times in the action plan, however it is unclear whether these are ready for implementation. Committee members agreed that consideration of closures could be included in the same boxes under consideration for soak time restrictions. One committee member suggested adding a two-week time area closure during times of high bycatch, and others added that one-week intervals should be analyzed to balance what may work for fishermen and also achieve bycatch reduction.

Consensus Statement 1:

The FMAT/PDT develop and analyze alternatives for dogfish under two options: 1) apply to mesh size 7-inch or greater only and 2) apply to mesh 5-inch and greater (to the extent possible separating out by mesh size category).

Passed by consensus (Dogfish Committee)

Consensus Statement 2:

Include in the range of alternatives for dogfish for area-based measures (NJ hotspot statistical areas and DE/MD/VA statistical areas) three options:

1) by statistical area group,
2) by 10-minute square (as distance from shore, e.g., approximating 0-6 or 0-9 mile (sub-options)), and
3) straight line that approximates shoreline at (e.g., 6 or 9 miles from shore (sub-options)).

Goal of encompassing hotspots.

Passed by consensus (Dogfish Committee)

Consensus Statement 3:

Add options for dogfish for soak time limits for 48 hours and 72 hours.

Passed by consensus (Dogfish Committee)

Consensus Statement 4:

Add alternatives for dogfish for time-area closures in one-week intervals up to four weeks for each of the three area-based options (NJ hotspot statistical areas and DE/MD/VA statistical areas):

1) by statistical area group,
2) by 10-minute square (as distance from shore, e.g., approximating 0-6 or 0-9 mile (sub-options)), and
3) straight line that approximates shoreline at (e.g., 6 or 9 miles from shore (sub-options)).

Goal of encompassing hotspots.

Passed by consensus (Dogfish Committee)

Monkfish

A committee member asked about Harbor Porpoise Take Reduction Plan gear requirements and how these interact with use of the low-profile gear. Council staff explained that the particular aspect of the harbor porpoise plan gear requirements in question is minimum twine size, which may not work with the gear specifications of the low-profile gear. The FMAT/PDT is looking into this further. Staff clarified that this only impacts Option C under the monkfish alternatives (use of low-profile gear year around), since the other low profile-gear options apply to months that do not overlap with the months under the harbor porpoise requirements (January-April). GARFO staff added in the most recent Fox et. al. study the experimental twine size was 0.81 mm instead of the 0.9 mm required in the harbor porpoise plan. They also noted one fisherman at the AP meeting said just switching twine size might mitigate sturgeon bycatch.

Another committee member said for the soak time data tables in the draft alternatives it might be helpful to expand and include soak times by month for all hauls and not just those that had sturgeon interactions as it would be helpful to examine further if the committee hears that soak duration limits are viable. The Chair and council staff said the FMAT/PDT plans to follow up on this and other data exploration.

One committee member said between having no percent reduction mandate and sparse interactions in Southern New England he thought that time-area closures may be more than a minor change. Several committee members considered removing Southern New England measures but ultimately decided to leave these in the range of alternatives.

The monkfish committee went through Consensus Statements 2-4 for the dogfish measures and discussed their application to monkfish measures.

Consensus Statement 5:

Include in the range of alternatives for monkfish for area-based measures (NJ hotspot statistical areas and SNE hotspot statistical area) three options:

1) by statistical area group,
2) by 10-minute square (as distance from shore, e.g., approximating 0-6 or 0-9 mile (sub-options)), and

3) straight line that approximates shoreline at (e.g., 6 or 9 miles from shore (sub-options)).

Goal of encompassing hotspots.

Passed by consensus (Monkfish Committee)

Consensus Statement 6:

Add options for monkfish for soak time limits for 72 hours.

Passed by consensus (Monkfish Committee)

Consensus Statement 7:

Add alternatives for monkfish for time-area closures in one-week intervals up to four weeks for each of the three area-based options (NJ hotspot statistical areas and SNE statistical area):

1) by statistical area group,
2) by 10-minute square (as distance from shore, e.g., approximating 0-6 or 0-9 mile (sub-options)), and
3) straight line that approximates shoreline at (e.g., 6 or 9 miles from shore (sub-options)).

Goal of encompassing hotspots.

Passed by consensus (Monkfish CTE)

Overall:

Consensus Statement 8:

Recommend to the Councils that the Enforcement Committee(s) provide input on draft alternatives, specifically using soak time limits for managing gillnet fisheries and use of more refined areas beyond statistical area for time-area alternatives.

Passed by consensus (both Dogfish and Monkfish Committees)

Public Comment:

Greg DiDomenico (Lund's Fisheries) referred to previous meetings on this topic and said that he had been told that the New Jersey hotspot encompasses less than three individuals so the data are confidential and cannot be shared. He asked if three individuals have created a hotspot for sturgeon bycatch, as it would be helpful to know if this is the case. Council and GARFO staff explained that the entire hotspot area is not three vessels but that when breaking this area down further into certain times and areas, there are confidentiality issues.

AGENDA ITEM #3: Other business

No other business was discussed.

The Committee meeting adjourned at approximately 3:00 p.m.

MEETING SUMMARY

Joint Monkfish and Dogfish Advisory Panel

Webinar
3-6 pm
May 16, 2023

The Monkfish and Dogfish Advisory Panel (AP) met jointly on May 16, 2023, via webinar to discuss: 1) the Final Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large-Mesh Gillnet Fisheries including a review of the draft alternatives developed by the Sturgeon Bycatch Fishery Management Action Team (FMAT)/Plan Development Team (PDT); 2) any additional data or information needs to help inform the range and development of alternatives; and 3) other business.

MEETING ATTENDANCE:

Monkfish Advisory Panel: Ted Platz, Greg Mataronas, Terry Alexander, Bonnie Brady, James Dopkin, Patrick Duckworth, Tim Froelich, Linda Hunt, Randall Morgan, Chris Rainone, and Lucas Raymond.

Dogfish Advisory Panel: Scott Curatolo-Wagemann, James Fletcher, Scott MacDonald, Chris Rainone, Roger Rulifson, Mark Sanford, Kurt Ward, and John Whiteside, Jr.

Council Staff: Karson Cisneros (MAFMC); Jenny Couture and Robin Frede (NEFMC).

In addition, five members from the Monkfish Committee and three members from the Spiny Dogfish Committee along with approximately eight members of the public attended. Also in attendance were: Cynthia Ferrio, Lynn Lankshear, Danielle Palmer, and Spencer Talmage (GARFO); Bridget St. Amand and Jason Boucher (NEFSC); James Boyle (ASMFC); Kiley Dancy and Jason Didden (MAMFC staff); and Emily Bodell, Connor Buckley, Jamie Cournane, and David McCarron (NEFMC staff).

KEY OUTCOMES:

- The joint monkfish and spiny dogfish advisory panels provided the following general input, applicable to both fisheries:
    - Need better data and science regarding sturgeon and state vs. federal sturgeon interactions
    - Generally thought the interactions were a state issue (versus federal)
    - Any measures to reduce sturgeon interactions should account for the decline in gillnet effort given sturgeon interactions are expected to subsequently decline
- The joint AP provided the following input applicable to the monkfish fishery:
    - For New Jersey sturgeon bycatch hotspot, measures should apply inshore within 3-6 miles in the spring given sturgeon are more nearshore. The advisors do not prefer measures on low-profile gillnet gear and do not recommend measures by statistical areas.

- For Southern New England, do not include any alternatives given the low sturgeon interactions in this area.

- The joint AP provided the following input applicable to the spiny dogfish fishery:
  - For New Jersey sturgeon bycatch hotspot, advisors thought no overnight soak times was a reasonable approach for some fishermen.
  - For Delaware/Maryland/Virginia hotspot, there was a preference for a 48 - 72-hour soak time but a restriction on overnight soak time was likely not viable.

OPENING REMARKS: INTRODUCTIONS, APPROVAL OF AGENDA

Council staff introduced the joint monkfish and spiny dogfish advisory panel (AP), welcomed attendees, and sought approval of the agenda. There were no agenda changes. Staff reviewed the process and tentative timeline for this joint meeting given this is a joint action being developed by the New England and Mid-Atlantic Fishery Management Councils.

AGENDA ITEMS #1-2: Joint Sturgeon Action, Council Staff (NEFMC and MAFMC)

Council staff briefed the joint AP on the background of the action including an overview of the 2021 Biological Opinion, the formation of the Atlantic Sturgeon Bycatch Working Group, the sturgeon hotspots for federal large mesh gillnet fisheries, the definition of low-profile gillnet gear, and an overview of the action objectives. Staff also provided an overview of the draft alternatives developed by the FMAT/PDT including time-of-year and/or area restrictions for Southern New England (monkfish-only), New Jersey (monkfish and spiny dogfish), and Delaware/Maryland/Virginia (dogfish-only). Draft measures included requirement of low-profile gillnet gear in federal waters for the monkfish fishery and soak time duration during certain times of the year for the monkfish and dogfish fisheries. These measures are not mutually exclusive. Monthly trends in bycatch and soak time data were also provided for context.

Measures discussed but not included in the draft alternatives were also briefly discussed. The FMAT/PDT also emphasized that this action is not able to address state water issues in this action and that a complementary state plan for dogfish (though not for monkfish) is anticipated.

Questions and Comments on the Presentation:

A monkfish advisor asked about the Gulf of Maine (GOM) sturgeon bycatch hotspot given the hotspot appears to include the habitat closure where no fishing is permitted. This is most likely due to fishing along and near the boundaries of the habitat management area. Compared to other bycatch hotspots in the Atlantic, the GOM hotspot is relatively sparse. Another advisor commented that gear modification through low-profile gear and soak time restrictions are two approaches, however, using lighter twine size is the preferred method given the lighter twine doesn't hold sturgeon, though it does catch enough target species (especially skates and monkfish).

Several advisors asked about the percentage of interactions in state versus federal waters off New Jersey hotspot. One advisor noted that there are two different monkfish fisheries, one nearshore and one offshore, and commented that he can catch the full skate limits by day-soaks. Council and GARFO staff explained that data can be further analyzed to parse state and federal waters fishing. A couple of advisors did not think sturgeon should be listed as endangered and that the action plan is based on very limited data. Several advisors did not think that management measures are needed to minimize sturgeon interactions.

Regarding soak time, an advisor thought 48-hour soak time duration is long enough to catch enough monkfish, noting that overnight soak times are needed and that long soak times especially inshore catch too many skates. He also thought that the dogfish fishery does not need to soak nets for as long as monkfish and most sturgeon are released alive as a result. Later in the meeting, a couple of advisors cautioned that if soak times are overly restricted then fishermen will fish with additional gear in order to catch the same amount of monkfish.

Regarding statistical areas, one advisor asked if February was specifically excluded from consideration for dogfish soak time restrictions. Staff stated that interactions were much lower in February compared to December, January, and March; the advisor cautioned that it is costly to switch gears for a short time period.

Regarding data needs, a few advisors requested more recent data, parsing out data by individual year (versus summing across 2015 - 2020), and sturgeon takes in state versus federal waters. Advisors commented on the decline in gillnet effort over time and expressed confusion on how it's possible that both sturgeon and gillnet effort are both declining. Staff acknowledged that while gillnet effort has reduced, this cannot be taken into account when developing measures to minimize sturgeon bycatch given there is nothing preventing gillnet effort from increasing in the future. There was a brief discussion on the sturgeon biomass in Nova Scotia where the population has declined over time but that sturgeon are still caught in the Bay of Fundy. Later in the discussion, an advisor recommended Council staff contact Ken Riley from NOAA for data from the Atlantic Sturgeon Cruise captures which he said involved the Cooperative Winter Tagging Cruise vessels, Scientific Party members, and principal partners (ASMFC, MD-DNR, NCWRC, USFWS, and NMFS).

The joint AP briefly discussed the difference between sturgeon bycatch and mortality and that mortality rates vary based on the gillnet mesh size. An advisor commented that mortality rates are extremely low and that the largest sturgeon that are most fecund are not typically caught by monkfish and dogfish gillnets. This action is focused on reducing bycatch and interactions overall.

A couple of AP members asked about the last sturgeon stock assessment and the assessment method, specifically whether the trawl survey data were used and if all sturgeon interaction data were compiled from various sources (in the river, by the commercial gillnet fishery, etc.). The last stock assessment is from 2017 and the next one is scheduled for 2024. Staff did not know the assessment details but can provide this information in the action plan. One advisor expressed discontent that the fishing industry was excluded from the sturgeon bycatch working group given the management measures would be further along if fishermen were included. While the Councils were also not included in the development of the sturgeon action plan, there are now opportunities to weigh in on the action development through the AP, Committee, and Council meetings.

Public Comment:

- **Ian Parente (RI commercial monkfish and dogfish fisherman):** emphasized that what works in New Jersey does not necessarily work in Rhode Island in terms of reducing vertical mesh size. The reason fishermen use certain gear types is to catch enough target species. He thought that the soak time data are misleading given not all of the gear is hauled at a time. He also thought that the lighter mesh size in the north will increase bycatch of other species, which is why fishermen use a heavier gauge. Any measures that reduce monkfish catch will result in additional gear in the water.
- **Liam Sullivan (RI commercial monkfish fisherman):** Asked how statistical area 539 can be considered a bycatch sturgeon hotspot but also low sturgeon interactions.

    Staff explained that this area was included in the draft alternatives in case the Councils were interested in measures for reducing sturgeon interactions, however, acknowledged that there is low interaction risk especially relative to other bycatch hotspots.

Discussion:
An advisor echoed concern about the draft alternatives, specifically use of the low-profile gear with safety concerns and soak time restrictions reducing catch of target species; he expressed concern for going out of business along with a few other advisors if additional restrictions are put in place. Staff emphasized that the draft alternatives were brought forward for discussion to reduce overall interactions (e.g., not just mortality) and that in addition to receiving input from the joint AP and Committee, enforcement officers still need to weigh in on the feasibility of the draft alternatives from an enforcement perspective.

Several advisors discussed the location of the sturgeon interactions, which they presumed to predominantly occur in state waters, based on their experience and looking at the bycatch hotspot maps. There should be different alternatives for different areas, the monkfish and dogfish fisheries should be treated differently, and within each of these fisheries, the nearshore and offshore components should also be treated separately given the operations tend to differ. Staff stated that further data delineation between state and federal water fishing will be done.

Regarding use of statistical areas for management measures for both the monkfish and dogfish fisheries, the AP suggested smaller areas; staff noted that these areas were included to help avoid shifting effort to other areas within a given statistical area where sturgeon could be present. Staff suggested a compromise of management measures that would apply to 3-6 miles from shore, which the AP appreciated. Staff will evaluate the proportion of sturgeon interactions inside and outside state waters as a next step.

In the monkfish fishery, there was a preference for soak time restrictions rather than a requirement to use low-profile gear which catches less monkfish. The AP also recommended evaluating higher soak times for the monkfish fishery up to 72 or 96 hours. A few advisors recommended shorter, two-week closures given that is potentially easier to manage than changing gear, which is costly, and lower soak times, which has safety concerns. The AP wanted additional data on sturgeon interactions in Southern New England specifically before suggesting any measures given the low number of interactions. One member suggested removing this area from further consideration.

For dogfish specifically, an advisor reiterated that the vast majority of sturgeon that are caught are released alive; staff reminded the AP that this action is focused on reducing overall interactions, not mortality of sturgeon. A couple of members thought restricting overnight soak times would be doable in New Jersey while others did not, with one advisor stating that 95% of dogfish are caught overnight. Longer soak times of up to 72 hours was suggested as was an evaluation of shorter closures closer to shore. A couple of advisors spoke against any closure for the dogfish fishery. There was a brief discussion on whether measures would apply to fishermen using >= 7" mesh given most of the fleet uses < 7" mesh. GARFO staff explained that the action plan is focused on the larger mesh based on the Biological Opinion but it is up to the Councils to decide whether measures would apply to < 7" mesh as well.

Public Comment:

- **Todd Sutton:** Support the AP in recommending smaller geographical areas instead of statistical areas; recommend evaluating state versus federal interactions, better science and data, and do not support low-profile gear requirement or 48-hour soak time requirement.
- **Liam Sullivan:** Did not support low-profile gear requirement and from a Southern New England perspective, did not support 48-hour soak time given there is not a sturgeon bycatch issue in this region. He also commented that the stock assessment data are old and should be updated before proceeding.

AGENDA ITEM #3: Other business
No other business was discussed. The AP meeting adjourned at approximately 6:00 p.m.

Joint Framework Action to Reduce Sturgeon Bycatch in Spiny Dogfish and Monkfish Fisheries

Draft Alternatives

May 9, 2023

Prepared by the
New England Fishery Management Council
and the
Mid-Atlantic Fishery Management Council

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

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2.0 BACKGROUND

The Mid-Atlantic Fishery Management Council (MAFMC) and New England Fishery Management Council (NEFMC) are jointly developing a framework action to reduce Atlantic sturgeon bycatch in the monkfish and spiny dogfish large mesh gillnet fisheries (defined as being greater than or equal to 7 inches). This action was initiated in response to recommendations made by the Atlantic Sturgeon Bycatch Working Group, as described in the Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large Mesh Gillnet Fisheries (referred to herein as 'action plan').

In May 2021, NOAA Fisheries issued a Biological Opinion which mandated the formation of a working group to evaluate and address Atlantic sturgeon bycatch in the Federal large mesh gillnet fisheries by 2024. To achieve this bycatch reduction by 2024, the working group recommended that the MAFMC and NEFMC consider a range of potential measures to reduce sturgeon bycatch in federal large mesh gillnet fisheries. Because spiny dogfish and monkfish are managed jointly, the Councils agreed to initiate a joint action to address sturgeon bycatch in these fisheries.

On April 21, 2023, the joint Fishery Management Action Team (FMAT)/Plan Development Team (PDT) held their first meeting to discuss potential measures from the action plan that could be applied to the spiny dogfish and monkfish fisheries. The draft alternatives below are based on that discussion and are recommended for review and refinement by the AP and Committee in preparation for the Council Meetings in June, where a range of alternatives is expected to be approved.

3.0 ACTION OBJECTIVES

The 2021 Biological Opinion does not specify the extent of bycatch reduction that must occur based on this action plan. In this case, Endangered Species Act (ESA) regulations require actions that are necessary or appropriate to minimize impacts (i.e., amount or extent) of incidental takes of the species. As a result, measures must be developed that minimize impacts to Atlantic Sturgeon in large mesh gillnet fisheries in federal waters. However, ESA regulations also specify that measures must involve only a minor change that do not alter the basic design, location, scope, duration, or timing of the federal large mesh gillnet fisheries considered in the Biological Opinion. The MAFMC and NEFMC agreed to focus on spiny dogfish and monkfish because the action plan identified these fisheries as two of the highest contributors to sturgeon bycatch in large mesh gillnet fisheries.

4.0 DRAFT ALTERNATIVES UNDER CONSIDERATION

The alternatives listed in this section are derived from ideas discussed by the FMAT/PDT and included in the action plan. They are intended to be a starting point for discussion at the joint AP, Committee, and Council meetings. Details within these draft alternatives can be changed, new alternatives can be added, and draft alternatives can be removed. A reasonable range of alternatives will balance minimizing sturgeon bycatch as mandated by the Biological Opinion, while not significantly altering the spiny dogfish and monkfish fisheries.

Action 1 addresses sturgeon bycatch in the federal monkfish gillnet fishery, while Action 2 focuses on bycatch reduction in the federal spiny dogfish gillnet fishery. Each action focuses on specific regional hotspots of high sturgeon bycatch identified in the action plan.

Figure 1. Atlantic sturgeon bycatch in the large mesh gillnet fishery within the Gulf of Maine and Southern New England statistical areas based on observer data from 2015-2020 and presented in the action plan. Circles indicate areas of sturgeon bycatch hotspots.

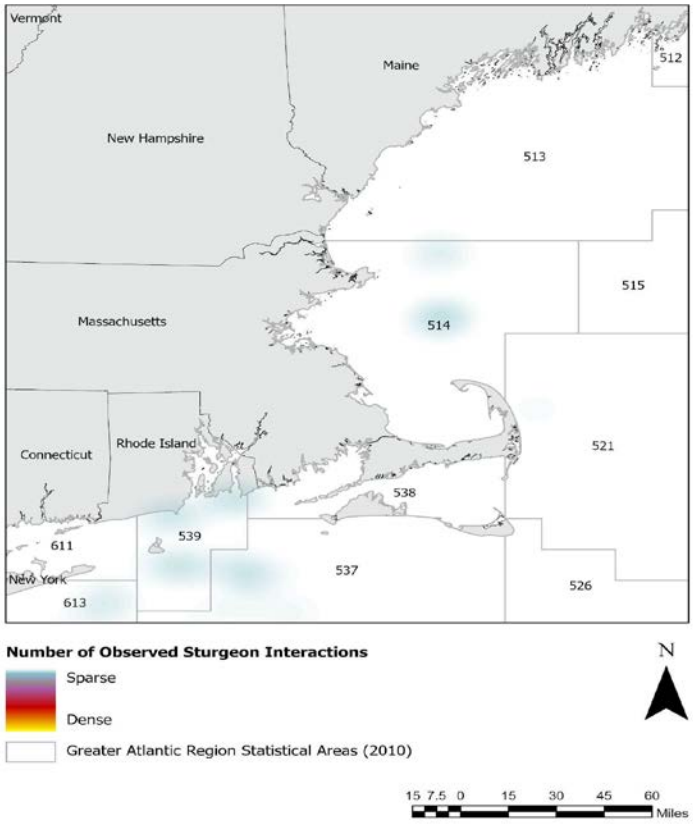


Figure 2. Atlantic sturgeon bycatch in the large mesh gillnet fishery from statistical areas off New Jersey to Virginia based on observer data from 2015-2020 and presented in the action plan. Circles indicate areas of sturgeon bycatch hotspots.

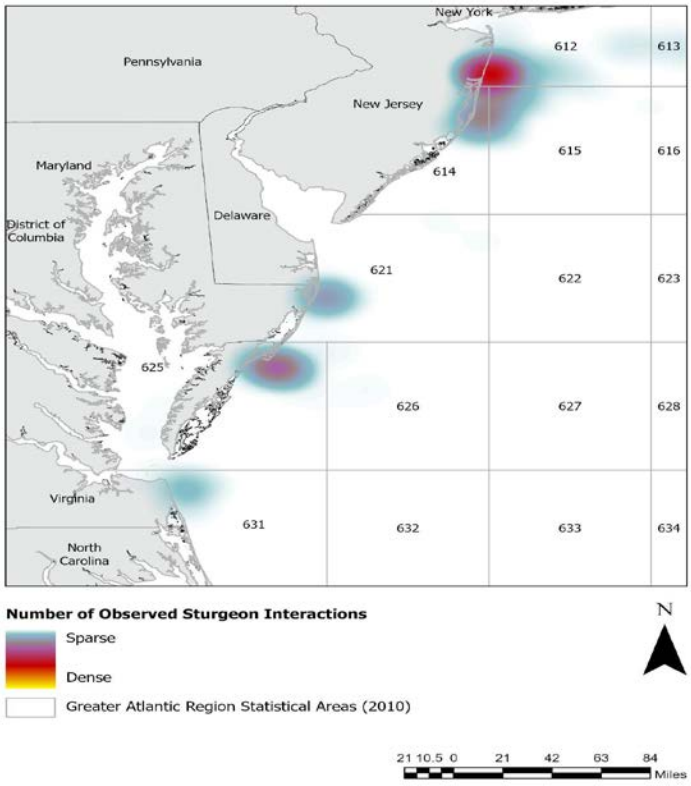
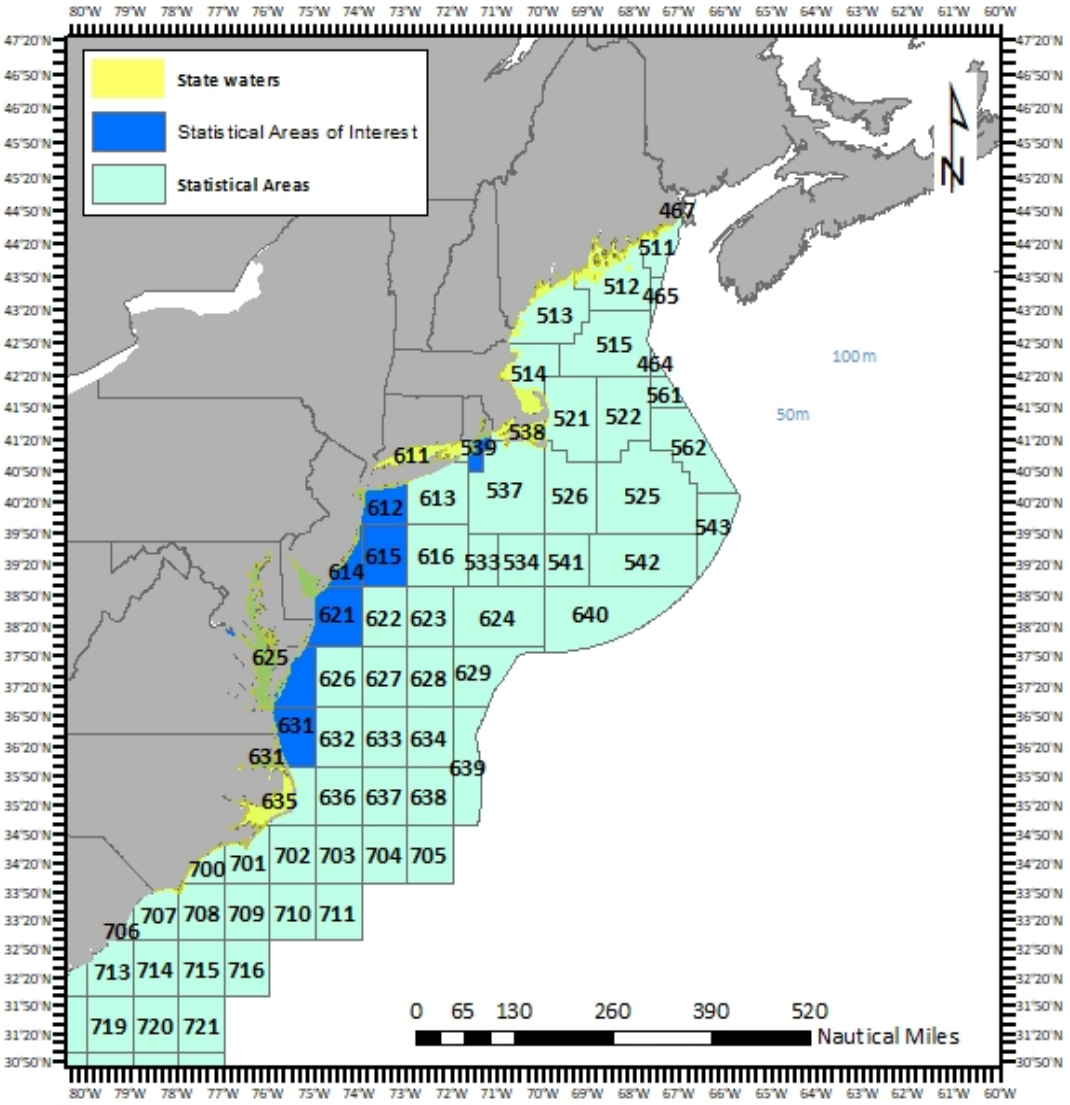


Figure 3. New England and Mid-Atlantic NMFS statistical areas with state waters shaded in yellow and statistical areas of interest shaded in blue. Statistical areas of interest are areas with potential temporal restrictions as described in the draft alternatives in this document.



4.1 Action 1 – Monkfish Fishery Measures

This action proposes sturgeon bycatch minimization measures for the monkfish fishery.

4.1.1 Alternative 1 - No Action/Status Quo

Under Alternative 1 (No Action/Status Quo), measures to reduce sturgeon bycatch would not be in place by 2024 through Council action. This alternative would not follow the sturgeon action plan's recommendation for developing measures to reduce sturgeon bycatch. The action plan laid out two possible paths to achieve a reduction in sturgeon bycatch by 2024. The recommended path was through action by the MAFMC and NEFMC, as shown in Table 1. The second path involved a NMFS-led proposed rule process under ESA. Given the need to reduce sturgeon bycatch in federal large mesh gillnet fisheries by 2024, selection of the no action/status quo alternative by the Councils does not necessarily mean no changes would occur to these fisheries.

Table 1. Two potential paths to address sturgeon bycatch in federal large mesh gillnet fisheries presented to the Councils by NMFS and included in the action plan.

If Councils develop action under MSA		If NMFS develops action under ESA	
January – April 2023	Council Action Development - Background Work	January – November 2023	NMFS Develops Proposed Rule*
April – September 2023	Council Action Development and Final Action	November 2023	Proposed Rule Published; 30-day public comment period
December 2023	Council Submission of Action	January – March 2024	NMFS Develops Final Rule
January – February 2024	NMFS Review and Publication of Proposed Rule	March – May 2024	NMFS publishes Final Rule and Implementation
March – May 2024	NMFS publishes Final Rule and Implementation		

4.1.2 Alternative 2 – Time-of-Year and/or Area Restrictions

Under Alternative 2, there would be time of year and/or area restrictions for federal fishing vessels targeting monkfish (e.g., vessels using a Monkfish day-at-sea (DAS)) using gillnet gear. These restrictions would occur based on when and where observed sturgeon bycatch is greatest, namely in federal waters off New Jersey and in Southern New England (see Appendix A Table 2 and Table 4 for soak time data and proportion of Atlantic sturgeon takes by month and statistical area in the monkfish fishery). The measures would apply to entire statistical areas to help ensure the measures can be enforced (versus smaller geographical areas) and to help prevent effort and sturgeon interactions shifting within the same statistical area.

Rationale: Alternative 2 Options A through D identify management measures that address bycatch hotspot areas and times of year in federal waters off the coast of New Jersey where observed sturgeon bycatch is greatest. Low-profile gillnet gear in the monkfish fishery has been shown to reduce sturgeon bycatch in the New Jersey region (Fox et al., 2012 and 2019). Low-profile gillnet gear is defined as mesh size ranging from 12 to 13 inches, net height ranging from 6 to 8 meshes tall, tie-down length of 24 inches, tie-down spacing of 12 feet, and a net length of 300 feet. These low-profile gear specifications are based on the research done by Fox et al. (2012 and 2019) and He and Jones (2013; see page 17-20 of action plan).

Alternative 2 Options E - F include management measures to address higher sturgeon bycatch in the Southern New England region focusing on statistical area 539.

Note: Multiple options can be selected within each alternative (i.e., not mutually exclusive).

4.1.2.1 Option A – Low-profile gillnet gear in federal waters off New Jersey in December

Under Alternative 2 Option A, low-profile gillnet gear would be required in statistical areas 612, 614, and 615 in federal waters for the month of December.

Rationale: According to the sturgeon action plan, dense sturgeon interactions were located in 612, 614, and 615 statistical areas and occurred farther offshore in the New Jersey Bight during the late fall/early winter months. According to observer data on trips targeting monkfish from 2015-2022, December had the highest contribution to sturgeon bycatch for these statistical areas.

4.1.2.2 Option B - Low-profile gillnet gear in federal waters off New Jersey in May

Under Alternative 2 Option B, low-profile gillnet gear would be required in statistical areas 612, 614, and 615 in federal waters for the month of May.

Rationale: The action plan identified a spring concentration of sturgeon interactions largely within and close to state waters in the spring months in statistical areas 612, 614, and 615. According to observer data on trips targeting monkfish from 2015-2022, May had the highest contribution to sturgeon bycatch for these statistical areas in spring. This alternative would be expected to achieve reduction of bycatch East of the 3-mile line within the bycatch hotspot (e.g., in federal waters).

4.1.2.3 Option C - Low-profile gillnet gear in federal waters off New Jersey year-round

Under Alternative 2 Option C, low-profile gillnet gear would be required in statistical areas 612, 614, and 615 in federal waters year-round.

Rationale: There has been some indication that fishermen who fish in 612, 614, and 615 statistical areas may not switch nets between a low-profile net and the current gear configuration. Given this, transitioning to a low-profile net for some of the year may have equivalent impacts to fishermen, and fishing low-profile nets year-round should further decrease sturgeon bycatch. This option will need to be adjusted or removed if found to be in conflict with twine size requirements in the Harbor Porpoise Take Reduction Plan. This Take Reduction Plan requires a specific minimum twine size of 0.9 mm for large mesh (7” or

greater) gillnets from January through April. This twine size may not work well with the low-profile gillnet gear tested for sturgeon bycatch reduction and defined in this document.

4.1.2.4 Option D – Maximum of 48-hour soak time in federal waters off New Jersey in May

Under Alternative 2 Option D, a maximum of 48-hour soak time in federal waters would be required in statistical areas 612, 614, and 615 for the month of May.

Rationale: According to observer data on trips targeting monkfish from 2015-2022, May had the highest contribution to sturgeon bycatch for 612, 614, and 615 statistical areas in spring. This option only addresses May because safety issues were raised by fishermen related to soak time restrictions during winter months for monkfish. Gear needs to be soaked for more than a day in order to catch enough monkfish and the following days may have poor weather for net retrieval. Thus, any soak time restriction in winter would pose a safety issue to fishermen.

4.1.2.5 Option E - Maximum of 48-hour soak time in federal waters off Southern New England in May

Under Alternative 2 Option E, a maximum of 48-hour soak time in federal waters would be required in statistical area 539 for the month of May.

Rationale: The highest interactions in Southern New England occur in late spring from April to June, according to the action plan. According to observer data on trips targeting monkfish from 2015-2022, May and June had the highest contribution to sturgeon bycatch for statistical area 539. Interactions with sturgeon were also observed from October - December, however, net retrieval is a safety concern during these months.

4.1.2.6 Option F - Maximum of 48-hour soak time in federal waters off Southern New England in June

Under Alternative 1 Option F, a maximum of 48-hour soak time in federal waters would be required in statistical area 539 for the month of June.

Rationale: The highest interactions in Southern New England occur in late spring from April to June, according to the action plan. According to observer data on trips targeting monkfish from 2015-2022, May and June had the highest contribution to sturgeon bycatch for statistical area 539. Interactions with sturgeon were also observed from October - December, however, net retrieval is a safety concern during these months.

4.2 Action 2 – Spiny Dogfish Fishery Measures

4.2.1 Alternative 1 – No Action/Status Quo

Under Alternative 1 (No Action/Status Quo), measures to reduce sturgeon bycatch would not be in place by 2024 through Council action. This alternative would not follow the sturgeon action plan's recommendation for developing measures to reduce sturgeon bycatch. The action plan laid out two possible paths to achieve a reduction in sturgeon bycatch by 2024. The recommended path was through action by the MAFMC and NEFMC, as shown in Table 1. The second path involved a NMFS-led proposed rule process under ESA. Given the need to reduce sturgeon bycatch in federal large mesh gillnet fisheries by 2024, selection of the no action/status quo alternative by the Councils does not necessarily mean no changes would occur to these fisheries.

4.2.2 Alternative 2 – Time-of-Year and/or Area Restrictions

Under Alternative 2, there would be time of year and/or area restrictions for federal fishing vessels targeting spiny dogfish using gillnet gear. These restrictions would occur based on when and where observed bycatch is greatest, namely in federal waters off New Jersey and Delaware/Maryland/Virginia (see Appendix A Table 3 and Table 5 for soak time data and proportion of Atlantic sturgeon takes by month and statistical area in the spiny dogfish fishery). The measures would apply to entire statistical areas to help ensure the measures can be enforced (versus smaller geographical areas) and to help prevent effort and sturgeon interactions shifting within the same statistical area.

Rationale: Currently, research has not been conducted on the feasibility of a low-profile net for the spiny dogfish fishery. Given this, the primary tools available to reduce sturgeon bycatch in the dogfish fishery are limiting soak times and time/area closures. Options A through D focus on soak time restrictions during specific areas and times of year. Two different soak time restriction sub-options are included, 1) no overnight soaks allowed, and 2) maximum soak time of 24 hours. The first option may be more enforceable than the second, though more input is needed.

Alternative 2 Options A and B focus on the New Jersey sturgeon hotspots in the dogfish fishery and Options C and D focus on hotspots identified off the coast of Delaware, Maryland, and Virginia, based on the observer program data (Figure 2). For each sturgeon hotspot area, there are options for seasonal restrictions in spring and winter, which have both been identified as times of high bycatch based on observer data and described in the action plan.

Note: Multiple options can be selected within each alternative (i.e., not mutually exclusive).

4.2.2.1 Option A – Soak time restrictions in federal waters off New Jersey from November 1 - December 31

Under Alternative 2 Option A, soak time would be restricted to either no overnight soaks (sub-option 1) or a maximum of 24-hour soak time (sub-option 2) in federal waters in statistical areas 612, 614, and 615 from November 1 - December 31.

Rationale: November and December were identified in the action plan as a period of increased interactions farther offshore in the New Jersey Bight during the late fall and early winter. According to observer data on trips targeting spiny dogfish from 2015-2022, November and December had the highest

contribution to sturgeon bycatch in the winter months for these statistical areas. The sub options provide two different soak time restrictions.

4.2.2.1.1 Sub-option 1 – No overnight soaks allowed

Rationale: In contrast to monkfish, some fishermen said that not soaking gillnets overnight is feasible for the dogfish fishery. This may vary by fisherman and region.

4.2.2.1.2 Sub-option 2 – Maximum of 24-hour soak time

Rationale: This option allows for a longer soak time than sub-option 1, however it may present the same potential safety issue described in the monkfish alternatives during winter months, where a fisherman may set the net on a good weather day and then have to retrieve gear the next day when conditions have worsened. This sub-option is also meant to address a concern with restricting overnight soaks heard from a fisherman who said that dogfish are typically caught at night. This occurrence may vary by season or region so more input is needed.

4.2.2.2 Option B – Soak time restrictions in federal waters off New Jersey in April

Under Alternative 2 Option B, soak time would be restricted to either no overnight soaks (sub-option 1) or to a maximum of 24-hour soak time (sub-option 2) in federal waters in statistical areas 612, 614, and 615 for the month of April.

Rationale: The action plan identified a spring concentration of sturgeon bycatch largely within and close to state waters in the spring months off New Jersey. According to observer data on trips targeting spiny dogfish from 2015-2022, April had the highest contribution to sturgeon bycatch in the spring months for these statistical areas. This option would be expected to achieve a reduction of bycatch East of the 3-mile line within the bycatch hotspot (e.g., in federal waters). The spring interactions were more inshore and partially within state waters so to comprehensively reduce bycatch, there could be a recommendation that the ASMFC spiny dogfish plan also restrict soak times in state waters contained within 612, 614, and 615 statistical areas during the month of April.

4.2.2.2.1 Sub-option 1 – No overnight soaks allowed

Rationale: In contrast to monkfish, some fishermen said that not soaking gillnets overnight is feasible for the dogfish fishery. This may vary by fisherman and region.

4.2.2.2.2 Sub-option 2 – Maximum of 24-hour soak time

Rationale: This option allows for a longer soak time than sub-option 1 and may not present the same potential safety issue as soak time restrictions in the winter months. This sub-option is also meant to address a concern with restricting overnight soaks heard from a fisherman who said that dogfish are typically caught at night. This occurrence may vary by season or region so more input is needed.

4.2.2.3 Option C – Soak time restrictions in federal waters off Delaware, Maryland, and Virginia from December 1 – January 31

Under Alternative 2 Option C, soak time would be restricted to either no overnight soaks (sub-option 1) or to a maximum of 24-hour soak time (sub-option 2) in federal waters in statistical areas 621, 625, and 631 from December 1 – January 31.

Rationale: December and January were identified as having increased interactions with sturgeon in Federal waters further offshore than in spring in the hotspot areas off Ocean City, MD (statistical area 621) and Chincoteague, VA (statistical area 625). According to the action plan, the area in and just south of the mouth of Chesapeake Bay (statistical area 631), interactions between Atlantic sturgeon and gillnet gear had no seasonal patterns evident. However, according to observer data on trips targeting spiny dogfish from 2015-2022, December and January had the highest contribution to sturgeon bycatch relative to other months for this statistical area.

4.2.2.3.1 Sub-option 1 – No overnight soaks allowed

Rationale: In contrast to monkfish, some fishermen said that not soaking gillnets overnight is feasible for the dogfish fishery. This may vary by fisherman and region.

4.2.2.3.2 Sub-option 2 – Maximum of 24-hour soak time

Rationale: This option allows for a longer soak time than sub-option 1, however it may present a potential safety issue during winter months, where a fisherman may set the net on a good weather day and then have to retrieve gear the next day when conditions have worsened. This sub-option is also meant to address a concern with restricting overnight soaks heard from a fisherman who said that dogfish are typically caught at night. This occurrence may vary by season or region so more input is needed.

4.2.2.4 Option D – Soak time restrictions in federal waters off Delaware, Maryland, and Virginia in March

Under Alternative 2 Option D, soak time would be restricted to either no overnight soaks (sub-option 1) or to a maximum of 24-hour soak time (sub-option 2) in federal waters in statistical areas 621, 625, and 631 in the month of March.

Rationale: Spring months were identified as having increased interactions with sturgeon in the hotspot areas off Ocean City, MD (statistical area 621) and Chincoteague, VA (statistical area 625). For the area in and just south of the mouth of Chesapeake Bay (statistical area 631), interactions between Atlantic sturgeon and gillnet gear had no seasonal patterns evident. This southernmost hotspot/statistical area was included in the temporal restriction for consistency in measures and acknowledging that some bycatch reduction would likely be achieved. The spring month interactions were more inshore and partially within state waters so for effective bycatch reduction there could be a recommendation that the ASMFC dogfish plan also restrict soak times in state waters contained within these statistical areas in March.

4.2.2.4.1 Sub-option 1 – No overnight soaks allowed

Rationale: In contrast to monkfish, some fishermen said that not soaking gillnets overnight is feasible for the dogfish fishery. This may vary by fisherman and region.

4.2.2.4.2 Sub-option 2 – Maximum of 24-hour soak time

Rationale: This option allows for a longer soak time than sub-option 1 and may not present the same potential safety issue as soak time restrictions in the winter months. This sub-option is also meant to address a concern with restricting overnight soaks heard from a fisherman who said that dogfish are typically caught at night. This occurrence may vary by season or region so more input is needed.

4.3 MEASURES DISCUSSED BUT NOT INCLUDED AS ALTERNATIVES

At their April 21 meeting, the FMAT/PDT considered other measures that were not recommended to be included as alternatives in this action. These measures were either deemed too large of an alteration of the fisheries, thus potentially violating the constraints of making only a "minor change" to the fisheries under the ESA, or they were considered unlikely to provide bycatch reduction benefit.

- Widespread use of low-profile nets in the monkfish fishery, or use of low-profile nets in the dogfish fishery: These nets have not been tested in regions outside of New York and New Jersey for use in the monkfish fishery and have not been studied yet for the dogfish fishery. As ongoing research continues, it may be a bycatch reduction tool in the future. Given this, the impacts of such measures to the fisheries and sturgeon bycatch are unknown.
- Year-round soak time restrictions: Given the current median soak times of 24 hours for spiny dogfish and 96 hours for monkfish, a large temporal restriction may constitute enough of an alteration that fishery performance is likely to decline.
- Overnight soak time restrictions for the monkfish fishery (overall and by particular seasons): Not considered given this would likely substantially adversely affect the fishery operations. More specifically, the median soak time for the monkfish fishery is 96 hours, and ranges from 48 hours in statistical areas off New Jersey to 120 hours for areas in Southern New England (Table 813 in action plan).
- Area closures: small area closures are likely to shift effort and bycatch rather than achieve bycatch reduction. Large area closures would likely constitute alteration of the basic design, location, scope, duration, or timing of the fisheries.
- Gulf of Maine soak time restrictions for the monkfish fishery: Not being considered for monkfish fishery measures given the low observed sturgeon interaction rates (Figure 1).
- Complementary ASMFC spiny dogfish measures in state waters: The FMAT/PDT emphasized the importance of the complementary ASMFC spiny dogfish plan and the need to work with state partners to have a meaningful impact on sturgeon bycatch reduction. Fishermen indicated that for bycatch reduction to be effective, state waters need to be addressed in addition or in tandem with this action. ASMFC staff on the FMAT/PDT noted that the intent is for the Commission to ensure that there is parity between the complementary plans.

NOTE: If the AP and/or Committee is interested in any of these measures that were discussed but not included within the draft alternatives then those can be added within the range of alternatives to be considered by both Councils in June.

4.4 ADDITIONAL CONSIDERATIONS

- Use of EFPs would be beneficial to better understand the effectiveness of low-profile nets in the dogfish fishery and other regions for monkfish.
- General inability to address state waters issues within this action. There is a complementary plan for dogfish as described above; however, there is no equivalent for monkfish.
- VMS data can be evaluated in the future if need be; the PDT/FMAT caution against the reliability of these data given protected species interactions are not regularly reported on VMS and not all vessels are required to use VMS, especially in the Mid-Atlantic region.

APPENDIX A

Appendix A includes preliminary data on soak time for the monkfish and spiny dogfish fisheries, proportion of sturgeon takes by month and statistical area for monkfish and dogfish fisheries, and harbor porpoise and sea turtle closure areas.

Table 2. Soak time data, number of Atlantic sturgeon takes, and number of hauls in the monkfish fishery, across 2015 – 2022.

Month	# of Sturgeon Takes	Minimum Soak Duration (# hours)	Maximum Soak Duration (# hours)	Average Soak Duration (# hours)	# Hauls
Jan	39	24	264	113	31
Feb	9	48	288	126	9
Mar	3	72	288	144	3
Apr	13	24	216	92	11
May	61	24	264	69	50
Jun	21	48	168	93	18
Jul	C	C	C	C	C
Aug	5	72	120	102	5
Oct	4	72	96	84	4
Nov	17	48	120	84	16
Dec	98	24	168	69	65

Notes: 'C' indicates confidential data with < 3 hauls.
Source: Observer data from 2015 – 2022, accessed April 2023.

Table 3. Soak time data, number of Atlantic sturgeon takes, and number of hauls in the spiny dogfish fishery, 2015 – 2022.

Month	# of Sturgeon Takes	Minimum Soak Duration (# hours)	Maximum Soak Duration (# hours)	Average Soak Duration (# hours)	# Hauls
Jan	53	0.3	72	32	18
Feb	15	0.3	48	24	10
Mar	43	0.2	78	35	19
Apr	44	1.2	192	35	18
May	7	24	48	32	3
Jun	0	0	0	0	0
Jul	0	0	0	0	0
Aug	0	0	0	0	0
Sep	0	0	0	0	0
Oct	12	0.9	48	21	7
Nov	74	0.6	57.6	16	50
Dec	71	0.4	96	30	36
Source: Observer data from 2015 – 2022, accessed April 2023.					

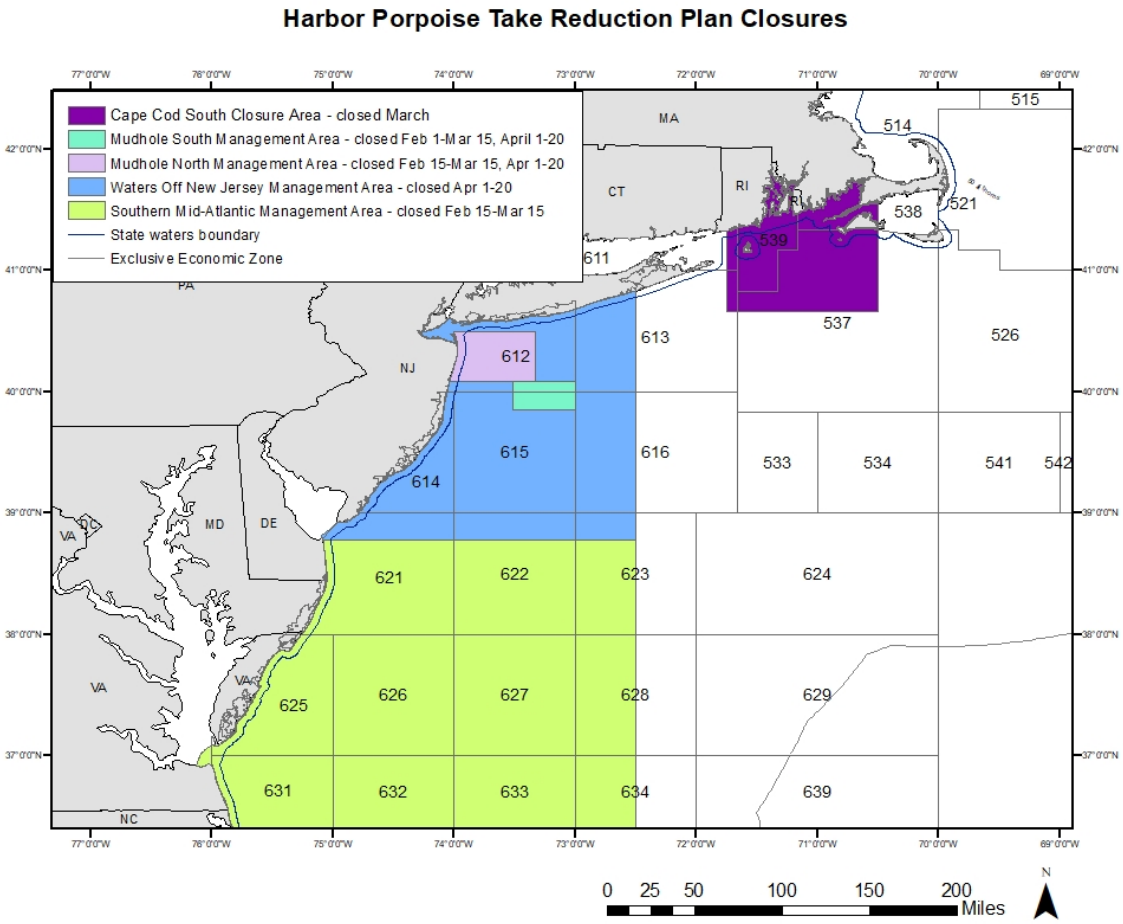
Table 4. Proportion of Atlantic sturgeon takes by month and statistical area based on observed monkfish trips from 2015 – 2022. Months and statistical areas that contributed 10% - 100% of annual takes are shaded on a color gradient from green (lower %) to red (higher %).

Monkfish Primary Target				
	SNE	NJ hotspot		
Month	539	612	614	615
1	0%	16%	0%	21%
2	0%	3%	0%	5%
3	0%	0%	0%	0%
4	0%	0%	0%	6%
5	26%	10%	0%	35%
6	53%	3%	0%	2%
7	0%	0%	0%	0%
8	0%	0%	0%	0%
10	0%	0%	0%	0%
11	16%	0%	0%	2%
12	5%	69%	100%	30%
Source: Observer data from 2015 – 2022, accessed April 2023.				

Table 5. Proportion of Atlantic sturgeon takes by month and statistical area based on observed spiny dogfish trips from 2015 – 2022. Months and statistical areas that contributed 10% - 100% of annual takes are shaded on a color gradient from green (lower %) to red (higher %).

Spiny Dogfish Primary Target						
	NJ hotspot			**DE/MD/VA hotspot**		
Month	**612**	**614**	**615**	**621**	**625**	**631**
1	0%	0%	17%	2%	33%	23%
2	0%	0%	0%	0%	4%	13%
3	0%	0%	0%	7%	19%	29%
4	46%	3%	0%	15%	5%	6%
5	11%	0%	0%	0%	0%	0%
10	5%	10%	17%	9%	0%	0%
11	35%	80%	17%	30%	8%	8%
12	4%	7%	50%	37%	30%	21%
Source: Observer data from 2015 – 2022, accessed April 2023.						

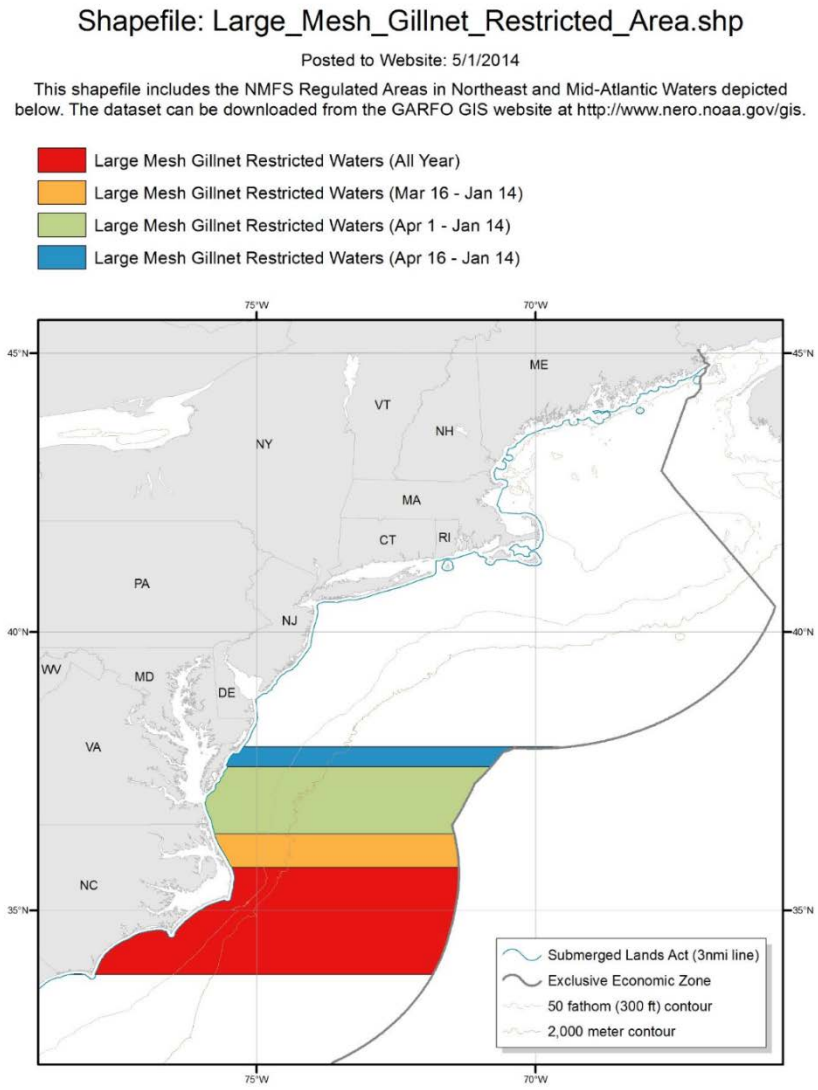
Figure 4. Harbor Porpoise Take Reduction Plan closures.



Note: All closures are for large-mesh (≥7 inches) gillnet gear, except Mudhole North and Mudhole South Management Areas are also closed to small-mesh (>5 - <7 inches) gillnets Feb 1-Mar 15.

Source: Harbor Porpoise Take Reduction Plan, https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/harbor-porpoise-take-reduction-plan

Figure 5. Large mesh (>7 inches) Gillnet Restricted Area for sea turtle protection. Gillnets >7 inches are prohibited during the times and areas depicted.



Source: Virginia and North Carolina Large Mesh Gillnet Final Rule, https://www.fisheries.noaa.gov/action/virginia-and-north-carolina-large-mesh-gillnet-final-rule

MEETING SUMMARY

Sturgeon Bycatch Fishery Management Action Team (FMAT) / Plan Development Team (PDT)

Webinar
April 21, 2023
10:00 a.m. – 12:30 p.m.

Agenda

The Fishery Management Action Team/Plan Development Team (referred to as Team) met to discuss 1) the Action Plan to Reduce Atlantic Sturgeon Bycatch in Federal Large-Mesh Gillnet Fisheries (Action Plan) that was developed by NOAA's Atlantic Sturgeon Bycatch Working Group, 2) the application of the Action Plan recommendations to the jointly managed spiny dogfish and monkfish gillnet fisheries, 3) potential alternatives, and 4) further data needs.

Meeting attendance

Team members included: Karson Cisneros (Co-Chair), Jenny Couture (Co-Chair), Robin Frede (Co-Chair), Spencer Talmage, Cynthia Ferrio, Lynn Lankshear, Bridget St. Amand, Jason Boucher, and James Boyle.
Additional Council staff included: Jason Didden (MAFMC) and Emily Bodell (NEFMC).
Approximately twelve other members of the public attended including members from the monkfish and dogfish Advisory Panels and Committees.

Joint Monkfish/Dogfish Framework to Reduce Atlantic Sturgeon Bycatch

The co-chairs reviewed the meeting agenda and provided background information on the New England and Mid-Atlantic Fishery Management Councils' decision to take joint action to address Atlantic sturgeon bycatch in the monkfish and spiny dogfish gillnet fisheries. Staff also reviewed an outline of the tentative timeline for the action. The goal of the meeting was to generate a list of management measures that can be developed into a range of alternatives for the Joint Monkfish and Dogfish Committee and Advisory Panel to consider. The initial list of measures was based on the Action Plan recommendations. The Team had an overarching discussion on the scope of the action, discussion on application of the different Action Plan recommendations to the monkfish and dogfish gillnet fisheries and ideas for potential alternatives, and concluded with a discussion on further data needs.

General Discussion on Action Plan and Application to Council Action

The co-chairs raised a couple of overall questions, one of which being whether GARFO has any guidance to offer on the general magnitude of bycatch reduction needed. Protected Resources Division (PRD) staff on the Team stated that the Reasonable and Prudent Measures (RPMs) in the 2021 Biological Opinion (BiOp) did not specify the percentage of bycatch reduction needed. In the Endangered Species Act (ESA) regulations, RPMs are defined as follows:

> *Reasonable and Prudent Measure refers to those actions the Director believes necessary or appropriate to minimize the impacts, i.e., amount or extent, of incidental take. 50 CFR 402.02; and,*
>
> *Reasonable and prudent measures, along with the terms and conditions that implement them, cannot alter the basic design, location, scope, duration, or timing of the action and may involve only minor changes. 50 CFR 402.14(i)(2)*

PRD staff explained that Section 7 of the ESA concerns federal agencies and acknowledges their need to carry out mandated responsibilities. As such, the reasonable and prudent measures (RPMs) are intended to minimize impacts to protected species but are not looking to make any major changes to the action itself (only minor changes), clarifying that 'the action' refers to the specific group of fisheries within the BiOp, and the RPMs narrow this down further to large-mesh gillnet fisheries. The Action Plan thoroughly reviewed some strategies for reducing bycatch of Atlantic sturgeon, and the Councils don't necessarily have to come up with a minimum reduction amount, but rather look at the recommendations as possible alternatives and try to minimize impacts on the monkfish and dogfish fisheries. In response to a question about how the Team would know if what is recommended is sufficient, PRD staff explained that the RPMs include 'minimize' bycatch so it's not just a reduction, and so there needs to be justification as to why the measures that are chosen minimize impacts to sturgeon while not affecting or altering fisheries substantially. There needs to be a balance between the two.

One Team member asked whether the group would have to consider the totality of other regulations that are also affecting gillnet fisheries such as wind farms and Atlantic Large Whale Take Reduction Team (ALWTRT) regulations, since part of the mandate is to not change the fishery substantially. One member noted that the size of the fleet is also declining over time and asked if this should be taken into account for any bycatch reduction measures. PRD staff said that while they can consider future actions, bycatch reduction has to be measured against present circumstances with what is currently in place unless it's known for certain something is happening (i.e., final rule publication). Other Team members noted the sturgeon work will be ahead of ALWTRT measures being developed, and said the group should coordinate with both the ALWTRT process and the Harbor Porpoise Take Reduction Team so those efforts can consider how sturgeon bycatch measures may interact with measures in those plans. Another Team member said that ebbs in fishery participation are likely due to economics, and with latent effort in the monkfish fishery, there could be more fishers in the future if market conditions change. As a result interactions with sturgeon may be declining now but that could change in the future. A Team member noted this was a challenge for the ALWTRT discussions regarding declining gillnet effort, and that they only receive credit for permanent changes to fishery participation, otherwise they could underestimate potential interactions. A Team member noted that the recent Monkfish Framework Adjustment 13 included a change in required minimum mesh size from 10 to 12 inches, with delayed implementation

until FY 2026, and asked if that could be incorporated into this process. PRD staff answered that if it's expected to occur it should be considered, but it's difficult to know how that might change sturgeon bycatch from present conditions. Another Team member noted that most of the fleet is already using 12-inch mesh which was part of the rationale for the change to 12 inch minimum, and pointed out that this won't be implemented until after the bycatch reduction is needed by 2024.

The co-chairs asked if the reduction needed is overall bycatch, bycatch mortality, or both. PDR staff explained that the RPMs require reducing Atlantic sturgeon bycatch and are not specific to bycatch mortality. One Team member noted the Action Plan tries to differentiate between mortality and interactions, and asked whether the post-release mortality work recommendation in the Action Plan would be considered separate from this action. A Team member confirmed post-mortality work would come at a later stage with NOAA leading the effort, and said that if the Team feels strongly about things that can be done to address post-release mortality they could include those, but this action is more focused on reducing bycatch/bycatch mortality.

Action Plan Recommendations – Low-Profile Net

A Team member noted that the low-profile net research focused on the monkfish fishery and asked if there has been any work planned to test this gear in the dogfish fishery, and others replied that there are not any research efforts at this time. The Team member also asked if there are plans to test the low-profile net in the monkfish fishery in other regions, since these studies were conducted mostly off New York and New Jersey. Another Team member responded that there is a Bycatch Reduction Engineering Program study that has been funded but hasn't started in-water work yet, which would be conducted along a broader region. Kevin Wark, a gillnetter who has participated in the past Fox studies[1] of the low-profile gear, added that this upcoming study is an extension on previous work and that he's begun approaching people along the coast from New England to Virginia to distribute the gear to other collaborators to test the final treatment in the field. He noted the twine size for this gear is reduced and the mesh increased in order to reduce sturgeon bycatch. These changes will reduce catch of target species, which is an important consideration given the goal is to find measures to reduce bycatch and to keep people fishing. He noted that because of the gear characteristics, the use of the low-profile net won't be approved for use after

[1] Fox, D. J., K. Wark, J. L. Armstrong, L. M. Brown. 2011. Gillnet Configurations and Their Impact on Atlantic Sturgeon and Marine Mammal Bycatch in the New Jersey Monkfish Fishery, Year 1. NOAA NMFS Contract Number: EA-133F-10-RQ-1160.

Fox, D. J., J. L. Armstrong, L. M. Brown, and K. Wark. 2012. The Influence of Sink Gillnet Profile on Bycatch of Atlantic Sturgeon in the Mid-Atlantic Monkfish Fishery. NOAA Contract Number: EA-133F10-SE-3358

Fox, D. J., J. L. Armstrong, L. M. Brown, K. Wark. 2013. Year Three, the Influence of Sink Gillnet Profile on Bycatch of Atlantic Sturgeon in the Mid-Atlantic Monkfish Fishery. NOAA Contract Number Completion Report: EA-133F-12-RQ-0697.

Fox, D., K. Dunton, and L. Bonacci. 2019. Conservation engineering within the Monkfish Gillnet Fishery: Reducing negative fishery interaction through gear modifications and assessing post release mortality and behavior of theendangered Atlantic sturgeon. NOAA-NMFS Saltonstall-Kennedy Grant
Program Award No. NA14NMF4270036. Final Report. 40 p.

January 1st in the Mid-Atlantic region because of Harbor Porpoise Take Reduction Plan requirements. Kevin added that he was a sturgeon directed fishermen in the 1980s.

The Team agreed that the studies of the low-profile net are a good starting place to consider recommended use for this gear in the monkfish fishery off New York and New Jersey because there are data to support this. The group also agreed against recommending low-profile net use in the dogfish fishery since there have not been any studies to date and so there is no information to show this wouldn't constitute more than a minor change to the fishery. It was also noted that most fishers use < 7 inch mesh for dogfish so they shouldn't be as affected by this action. The Team discussed the role of exempted fishing permits (EFPs) for further testing of the low-profile gear in both the dogfish and monkfish fisheries in other regions. These EFPs wouldn't get credit for bycatch reduction needed in this action by 2024 and wouldn't be a specific alternative, however, it could still be helpful to make recommendations regarding EFPs and continued testing of the gear for any further bycatch reduction in the future.

Several Team members raised the idea of identifying locations and times where sturgeon bycatch is highest to evaluate the possibility of seasonal gear restricted areas for low-profile net. This is particularly true in the Mid-Atlantic region where there are strong seasonal patterns of sturgeon movement (e.g., found along the coast and in and out of estuaries in the spring, and then further offshore in deeper waters in the fall). The Team recognized that requiring broad use of the low-profile net would constitute a major change to the fishery, and something like restricted gear areas could address sturgeon bycatch without impacting the entire fishery. A Team member commented that the reduction in vertical mesh required as part of the low-profile net may not be seasonal, since fishermen may opt to fish with modified nets throughout the season instead of swapping gear out. In general, the Team considered gear restrictions as potentially more effective than seasonal closures without being too disruptive to the fishery.

Libby Etrie (Monkfish Committee Chair) commented that they should consider lead time needed for the fishery to adjust mesh size and purchase any new nets, and asked whether cost is explicitly considered when minimizing impacts to the fisheries or if the focus is on minimizing disruption to the fishery. PRD staff clarified that the language in the RPMs regarding not having more than a minor change with regard to basic design, location, scope, duration, or timing of the fishery is not specific to any one thing, and believes this could consider cost impacts.

Chris Rainone said declining fishery participation was incorporated into the Ismooth method for the monkfish assessment, and asked since the stock assessment is based on effort, why can't bycatch reduction be based on declining participation too. A Team member explained that the Ismooth method is the backup assessment method used to provide catch advice, which takes the results of the NMFS trawl survey and applies it to recent fishery catch. He noted the flaw of this approach is it assumes that any reduction in catch is due to stock status, not a reduction in participation due to external factors (market conditions, COVID, etc.). He emphasized this is a different issue than bycatch reduction.

Action Plan Recommendations – Areas of Focus

The Team noted that the area of focus from Maryland south is mostly interactions with the dogfish fishery with some monkfish fishery occurring off Ocean City, MD and Virginia Beach. The area off New Jersey is a mix of both fisheries co-occurring, though remaining somewhat separate by target species.

In response to a question about the hotspots off Virginia and Maryland and observer coverage, a Team member explained there is a small fleet operating out of Virginia Beach, Ocean City, and Chincoteague, VA and that many have dropped their federal permits to fish in state only waters, so observer coverage is reduced. It was clarified that the determination of target species in the data reported in the Action Plan is determined from the observer data, where the observer asks the captain for the target species every haul and can include up to five target species. It was also clarified that the sturgeon status information in the observer data includes four options – alive, dead damaged, dead, unknown – and the observer reports out begin and end status.

For the area of focus in the Gulf of Maine, several Team members noted there are few interactions but also lower gillnet effort overall and that these interactions were all with the monkfish fishery. The Gulf of Maine interactions are heavily associated with the areas where fishing effort occurs, thus, it's difficult to parse out what measures could be implemented to reduce the few interactions seen. There is also not much of a seasonality to interactions which would make it difficult to have seasonal gear restrictions. Given these considerations, the Team recognized there may not be a need to include measures in this area. A Team member asked whether they need to address all areas with interactions, and PRD staff clarified that they don't necessarily have to since the goal is minimizing overall bycatch and interactions.

The Southern New England area of focus was noted to similarly have low interactions, although somewhat more than the Gulf of Maine, suggesting some measures would need to be considered. Of note is the overlap of interactions in statistical area 537 with the South Island Restricted Area, part of the ALWTRT regulations proposed to be applied to gillnet fisheries. It was noted that this area is expected to be heavily affected by wind energy development. One Team member noted that given the seasonality of the fishery and overlap with sturgeon for both monkfish and dogfish in the Southern New England region that a seasonal closure might not work well.

A Team member pointed out that observer coverage is not specific to sturgeon bycatch, and so the denser colors on the hotspot maps are where sturgeon, observer coverage, and fishing effort all overlap. Another FMAT member suggested overlaying VMS data to help groundtruth observer hotspots. A member noted that VMS is not required for all vessels in the monkfish or dogfish fisheries and so there will be gaps in the data, particularly in the south where fewer vessels have VMS. A team member noted the challenge of evaluating and publicly displaying the New Jersey hotspot area at a finer scale due to confidentiality issues. It was clarified that the hotspot off New Jersey (and all areas) show all interactions including sturgeon released alive and captured dead. There is a clear relationship in the observer data between soak time and sturgeon interaction, with longer soak times having more interactions, and more sturgeon recorded as dead.

Public comment:
Greg DiDomenico (Lund's Fisheries) said the Team needs to look at the observer data closely regarding the trips and type of fishery that has created the hotspot off New Jersey, as this hotspot is caused by very few individuals and correlates to risky fishing behavior as well as state waters violations. A Team member asked for more explanation of the risky behavior, and Greg said these include overnight soaks, from a mixed unidentified fishery operating inside state waters, and from a few people who don't operate well because it is easier and cheaper to fish in a spot convenient for them even if it is irresponsible given the presence of sturgeon. The Team member asked if preventing overnight soaks would help with this behavior, and Greg answered maybe, noting that restricting overnight soaks were crucial in ALWTRT recommendations. He emphasized the need for measures that will take away the incentive for people willing to operate poorly (both in terms of fishing areas and practices) and that will avoid shifting the problem elsewhere. He also referenced the confidentiality problem given there are likely less than three vessels causing the problem.

Kevin Wark also spoke about the hotspot in New Jersey saying this is an area where more anchored gillnet gear is found almost year-round and that this hotspot could easily be shifted anywhere along the coast depending on fishing methods and availability of species. He also noted that this is one of the last places where smooth dogfish are present which is also a factor. He referred to his experience with sturgeon interactions, saying that when fishing large mesh gear for 4 hours or less in 49-58 deg C water he had success in keeping sturgeon alive before release. He added that bycatch mortality seems to be higher in the ocean than inshore, like in the Chesapeake Bay.

Chris Rainnone, gillnet fisherman in the Mid-Atlantic, said the Team should address the New Jersey hotspot specifically and see what they can do to reduce sturgeon bycatch in these vessels. He fishes for both dogfish and monkfish, adding that he can day-fish for dogfish and catch his limits.

Action Plan Recommendations – Soak Time Limits

For the spiny dogfish fishery, the Team discussed restricting overnight soaks as one potential measure but noted that this would be challenging for the monkfish fishery. One Team member noted that on hauls with longer soak times, the sturgeon caught were all dead. Leaving nets soaking for a long time are considered outliers, thus, the member wondered if limits on soak duration of 24 or 48 hours on a seasonal basis would be reasonable for fishers to get enough catch to make the trip worth it. She did note the possibility of affecting fishing behavior and if this type of measure would result in people setting more nets in the water or going out more frequently, potentially resulting in more interactions. Enforcement considerations were noted as well.

On the seasonal soak time data in the Action Plan, one Team member requested adding in data on number of hauls to understand effort by fishery and season.

Public comment:
Kevin Wark expressed concern about limiting soak time to 48 hours, especially in winter months as it could be dangerous for gillnet vessels.

Specific measures to consider for possible alternatives

Based on discussion on each of the Action Plan recommendations, the Team generated ideas for possible measures to be considered as alternatives:

- No overnight soaks for the dogfish fishery to help with the New Jersey hotspot – will need to identify specific areas and seasons
- Require use of low-profile net for the monkfish fishery off New Jersey/New York – identify specific areas and season
- Soak duration limit for monkfish fishery in Southern New England – identify specific areas and seasons, possible soak time limit (48 hours?)

The Team clarified that measures for this action can only be created for federal waters and not state waters. PRD staff explained that the BiOp only applies to federal fisheries, and NOAA will have to take separate action for state fisheries, which is expected to occur after this action. The Team noted the challenge with federal fisheries operating in state waters and concerns about the hotspots moving inshore or offshore depending on the measures implemented. It was noted that federal dogfish permit holders could drop their permit and just fish in state waters to avoid restrictions put in statistical areas since this is an open access fishery. For the monkfish fishery, inshore waters becomes more of a skate fishery where permit holders can drop their federal permit to exceed federal skate limits and not fish under Days at Sea (DAS). In particular there is a lot of skate fishing happening off Rhode Island in state waters. Several FMAT members noted this ability to switch to state waters fishing can result in more sturgeon interactions where there is a lot of overlap with fishing effort inshore. NEFMC staff explained that in a skate action a couple of years ago, the Council looked into restricting the ability to drop the federal skate permit but didn't end up deciding to move forward on that, but that the team could look into that data if of interest. It was noted that most monkfish permits are limited access and while most permit holders don't drop their federal permits to fish in state waters, they are allowed to move permits on a skiff and move to state waters in order to exceed skate wing limits and trip limits.

Atlantic States Marine Fisheries Commission (ASMFC) staff on the Team said the ASMFC would want to match/complement Council measures. Other Team members emphasized the importance of the commission and state partners for dogfish management.

Public comment:

Kevin Wark and Chris Rainnone emphasized the importance of collaborating with the states and not focusing entirely on federal waters, referencing that 75% of transmitted adult sturgeon in the spring traverse within three miles inshore and that is where the majority of interactions are occurring. Kevin provided additional observations regarding monkfish fishing and interactions with skates and how that influences decisions to switch to state waters fishing.

Roger Wooleyhan, monkfish fisherman, commented that switching to the low-profile nets will be a big cost. He noted the fishery has had to adjust tiedown length previously and while they can deal with the

extra cost, this is an issue. He also commented that sturgeon are resilient and the whole coast is inundated with them, particularly from the influence of hatcheries.

Further data needs

The Team identified the following as additional data needs:

- Confidential observer data discussion – to better understand some of the hotspot areas
- Look into VMS data – to groundtruth observer data
- Additional data on hauls with soak time data – to understand effort
- Update observer data through 2022 – confirm if bycatch trends remain the same

Other business

None discussed. The Team meeting adjourned at approximately 12:30 p.m.

Follow up items

- Additional data requests and discussions
- Draft list of measures for possible alternatives – includes looking at data to identify specific areas and seasons to apply measures