Spiny Dogfish Monitoring Committee Meeting Summary

November 6, 2023 - Webinar

The Mid-Atlantic Fishery Management Council's (Council) Spiny Dogfish Monitoring Committee met on November 6, 2023 from 12:30pm to 3:15pm to develop recommendations for 2024-2026 specifications. The regulations guiding these recommendations are detailed in 50 CFR 648.230-232, but generally involve ensuring that the Annual Catch Limit (ACL) is unlikely to be exceeded – any ACL overages trigger pound-for-pound paybacks from a subsequent year. A key theme was the tradeoff between maximizing the limited available quota for 2024-2026 versus avoiding ACL overages and paybacks that could be disruptive to future fishing years.

Monitoring Committee Attendees: Jason Didden, Angel Willey, Conor McManus, Cynthia Ferrio, David McCarron, Dvora Hart, John Whiteside, Melinda Lambert, Nichola Meserve, and Scott MacDonald (100% attendance).

Other Attendees: Sonny Gwin, Bob Blais, Chris Batsavage, Chris Rainone, James Fletcher, Jared Auerbach, Joe Grist, Pierre Juillard, Wes Townsend, and Daniel Salerno.

Assessment Discussion

Jason Didden began the meeting with a summary of the assessment and the Council's Scientific and Statistical Committee's (SSC) findings. The assessment concluded that 2022 biomass (measured as pups/spawning output) was just above its target despite being relatively low, and that relatively low future catches are needed to stay at the target (due to the stock's reduced productivity). The SSC utilized the assessment model's conclusions and projections to set the following Acceptable Biological Catches (ABCs): 2024: 7,135 metric tons (MT), 2025: 7,312 MT; 2026: 7,473 MT. The 2024 ABC of 7,135 MT is 8.4% lower than the 2023 fishing year ABC of 7,788 MT. Both the Monitoring Committee and Public first engaged in discussion regarding the assessment, summarized below:

John Whiteside noted that the SSC remarked that recent changes in growth/size/maturity/ maximum-observed-female-size cannot be explained by direct effects from fishing (unlike the changes seen in the 1990s during more intense size-selective fishing). Dvora Hart hypothesized that there may be an indirect effect occurring where the smaller surviving females from the 1980s-1990s have been producing smaller fish.

Pierre Juillard noted that the primary processor has seen similar sized fish for the last 3-4 years. Dvora Hart highlighted Figure 3 from the SS3 assessment report (at https://www.mafmc.org/ssc-meetings/october-30-2023), which indicated landings did show a relatively similar/stable proportion of larger females from 2020-2022 but also declines both during the initial 1980s/1990s directed fishery and after the more recent 2012 landings peak. Other data (the

NMFS spring bottom trawl survey and other commercial fleets' landings and discards) also show historical declines of larger females. There was substantial discussion on whether recent reduced portside sampling could create a distorted understanding of the landings' length composition used within the assessment. Given the likely seasonal and/or spatial variability, higher sample sizes would be worthwhile. Follow-up discussions with Northeast Fisheries Science Center (NEFSC) staff clarified that the length data for the gillnet landings (where most landings come from) stem from both portside sampling of gillnet trip landings and at-sea sampling of kept fish on observed gillnet trips (mostly observer trip data in recent years). Scott MacDonald noted that vessels have been using smaller gear inshore in recent years to minimize trip costs, which could influence the size of dogfish in the landings (this could potentially be examined with observer data in the future). He observed relatively larger dogfish during the most recent Virginia fishing season - late 2022/early 2023 (the current assessment includes data through 2022). Discussion noted that there are some large fish seen in landings data in recent years, but a lower proportion compared to the 1980s or the early 2010s. Having state samplers collect landings' length information was raised as a possible solution, as was the possibility of sampling at the Massachusetts processor since almost all spiny dogfish landings are shipped to one Massachusetts processor.

Scott MacDonald observed that catch limits must have been set way too high during recent overfishing (2011-2021), since recent catches were substantially below their respective Acceptable Biological Catches (ABCs). According to the new assessment, this is true. Scott suggested that we should be wary of destroying this fishery with lower quotas given the variability we've seen in ABC recommendations in recent years (indicating high uncertainty).

Chris Rainone highlighted that the erroneous yo-yo assessment/management is making it impossible to sustain participation, and putting portions of the fishery out of business. He stated we should have a gillnet survey to avoid being in such a data poor situation and need to better account for climate/ecosystem impacts. He and Scott MacDonald also questioned whether we know if this model is better than previous approaches. Dvora Hart followed-up that this is the first standard statistical model that has been produced for the U.S. Atlantic spiny dogfish stock, and one advantage of now having a statistical population model is that there should be improved interannual stability in population size estimates and projections moving forward.

Specifications Discussion and Recommendations[1]

The ABCs recommended by the SSC, which are binding catch constraints are: 7,135 metric tons (MT) for 2024, 7,312 MT for 2025, and 7,473 MT for 2026. These resulted from application of the Council's risk policy to address scientific uncertainty, which, for a stock slightly above its biomass target (as dogfish is predicted to be for these years) dictates about a 54% chance of not overfishing. On average for these years, about 663 MT (a little more in 2024 and a little less in 2026) is set aside from the estimated overfishing level catch estimate to achieve the slightly better than 50% chance of avoiding overfishing (i.e. the 54% chance goal). This equates to setting aside 8%-9% of each year's estimated overfishing level of catch to address scientific uncertainty (i.e. to be slightly more than 50% certain that overfishing is not occurring).

[1] Current 2023 fishing year specifications are detailed in Table 4.

Canadian Landings Set-Aside:

The Monitoring Committee has previously recommended the most recent available Canadian estimates for a set-aside. The Canadians updated their 2019 landings estimate to 36 MT (previously 37 MT). This value is now somewhat outdated but does not cause concern given the small magnitude of Canadian landings. Some recent years have been a bit higher and others a bit lower (1 MT-54 MT range 2015-2019). The Monitoring Committee recommended setting aside 36 MT to account for Canadian landings.

Recreational Set-Aside:

The Monitoring Committee recommended setting aside the most recent 3-year average of 112 MT to account for recreational landings, a small component of total catch. This is less than the 2021 estimate of 214 MT used to set the 2023 specifications. The assessment's 2020, 2021, and 2022 recreational harvest estimates of 101 MT, 215 MT, and 19 MT respectively have PSEs in the 30-50% range (i.e. PSE's which warrant a "caution" from NMFS in terms of precision).

Dead discard set-aside and management uncertainty buffer:

The specific charge of the Monitoring Committee to recommend measures that *"ensure"* overages do not occur would be impossible without very large buffers that result in very small commercial quotas and would regularly fail to catch optimum yield. Accordingly, in recent years the Monitoring Committee has taken the approach of making recommendations that would constitute a good faith effort to avoid substantial overages in typical years. This approach should enable optimum yield to be caught in most years but in any given year there will be a possibility of unexpectedly high discards (primarily from other fisheries), possibly causing substantial ACL overages and potentially disruptive pound-for-pound paybacks in future years (especially if the full landings quota is also attained).

The discard set-aside and management uncertainty buffer are linked because the primary management uncertainty issue that could cause ACL overages (and then paybacks) is the difficulty in setting aside an appropriate amount for dead discards. In the last ten years of the assessment (2013-2022) dead discards varied from about 7,400 MT (2014) to 2,100 MT (2022). Note the management track assessment report provides discard amounts before gear-specific discard mortality rates are applied (these rates have been reviewed and accepted but are likely imprecise). The trend since 2013 is downward, though much of the trend is driven by 2013-2014 being relatively high and 2022 being relatively low. Annual discards vary due to both trends in actual discards as well as estimation imprecision, though spiny dogfish discards are not particularly uncertain relative to other species in the region.

The ex-officio industry members of the Monitoring Committee (John Whiteside and Scott MacDonald) recommended that the 2022 discard estimate, 2,134 MT, be set-aside for 2024-2026 along with taking no deduction for a management uncertainty buffer (Table 1 below). Their rationale for using the 2022 discard estimate was that it is the most recent discard estimate and discards have been trending down. The 2022 discard estimate (2,134 MT) is close to what was set aside for 2023 (2,088 MT), so the scaling down approach taken last year appears to be working. Also. 2,134 MT would be a small increase from the current discard set aside. Their

rationale for not needing a management uncertainty buffer included that the state/regional landings allocations create an implicit massive buffer in landings versus the commercial quota to offset any theoretical issues with higher-than-expected discards. Also, it was noted that any catch overages could be offset by the planned increases in the ABC in 2025/2026. Finally, Scott MacDonald closed his business that previously bought almost all the dogfish landed in Virginia, and it is unclear whether another dealer will be able to facilitate similar annual volume from Virginia (averaging 4 million pounds). They noted the critical negative impact from sequestering potentially available quota at these low catch limits – there won't be an industry left if any potential quota is made uncatchable, forcing the last processor to close. John and Scott disagreed that the approaches (either "A" or "B" below) suggested by the rest of the Monitoring Committee were reasonable or appropriate, given their rationale described above and tenuous state of the industry at even the current 2023 quotas (12.0 million pounds). It was also suggested that federal dealers could be required to switch to daily reporting of landings to minimize any potential landings overages.

The rest of the Monitoring Committee was concerned that combining the lowest recent discard estimate with no management uncertainty buffer may not be objective and could lead to large ACL overages and paybacks/disruptions in future years. The low overall 2022 discard estimate was also unusually low for small mesh gear. There is also a possibility of landings over-running the commercial quota after a federal waters closure, but some states match the federal measures (including Virginia which typically harvests toward the latter part of the fishing year). Discussion noted that part of the rationale last year for a potential management uncertainty buffer was the ad-hoc approach used for discards, and the two approaches for discards suggested below may reduce the need for uncertainty buffers. Conversely, discards are primarily the result of activity in other (trawl) fisheries, and the model is not integrating potential future effort changes in other relevant fisheries. The Monitoring Committee did not recommend a specific buffer amount, but noted the same buffer trade-off evaluated in previous years: higher buffers provide less quota now but lower chances of overages/paybacks; lower buffers result in more quota now but greater chances of overages/paybacks. This group did reach consensus on two approaches that should avoid substantial ACL overages (though an unexpectedly very high discard estimate could still lead to substantial ACL overages):

A) If a three-year average of discards is set aside (3,128 MT), that amount captures recent discard variability sufficiently such that a management uncertainty buffer would probably not be needed to avoid substantial overages. This would mean setting aside 3,128 MT for discards, which will substantially reduce commercial quotas from current levels even without any management uncertainty buffer. (Table 2 below)

B) The assessment model generates expected discards for the projection period in an objective manner despite uncertainty – as biomass slowly increases the model projects that discards will increase slowly as well. The Monitoring Committee noted that there is sensibility in using the model generated projected discards, just as is done by using the model generated ABCs. The projected amounts set aside for discards would be 2,382 MT for 2024, 2,441 MT for 2025, and 2,494 MT for 2026. The Monitoring Committee could not reach consensus on whether a management uncertainty buffer was needed if setting aside these model-generated discards, but did concur with the following statement: If the model-generated discard amounts are set-

aside, then the Committee may want to consider at least a small management uncertainty buffer given there is a 50% chance that realized discards will be higher (or lower) than those projected (due to the statistical nature of such estimates). Table 3 below describes the specifications using these discard amounts and zero uncertainty buffer, but staff will be able to illustrate varied management uncertainty buffers during the Committee meeting. Any management uncertainty buffer reduces the commercial quota by the same amount. A buffer amount therefore largely depends on the Councils' tolerances for potential overages and future paybacks, weighed against the immediate effect of reducing quota via a buffer.

Additional Public Comment

Pierre Juillard: The zero percent buffer is almost a necessity to get enough quota to keep processing beyond 2024. The peaks and valleys of quota have gotten us from four processors to just one.

Jared Auerbach: You can't decimate an industry where there's inexact science. Without a higher quota we're going to lose the current generation of participants as well as the next generation of entrepreneurs to invest in boats/processing/marketing.

Chris Rainone: The 30% discard mortality for gill nets is not believable given how we fish our gear for short soaks – the fish I released today out of Barnegat Light all swam away. If you put this quota below 10 million pounds we're in trouble as a fishery and we're already losing docks to wind – we won't have anywhere to go. You're going to put us out of business and yourselves because if there's no fishery to manage what are you going to do. At this rate you might as well put the nail in the coffin.

Daniel Salerno: I'm a little concerned about how you're looking at discards – if you take out 2013/2014 and 2022, discards were pretty flat from 2015-2021 and 2022 seems unnaturally lower than the previous 6-7 years. You may be underestimating the potential for higher dead discards occurring in 2024-2026.

Trip Limits

The Monitoring Committee also discussed trip limits, noting that trip limits (pounds per trip) have increased sequentially over the last decade (3,000 in 2009-2012, 4,000 in 2013, 5,000 in 2014-2015, 6,000 in 2016-2021, 7,500 in 2022-2023). Given recent performance, it's not clear whether the current 7,500-pound trip limit may cause early closures of the fishery, but all else being equal the quota will be utilized faster at higher trip limits compared to lower trip limits (many trips land right at the trip limit). Depending on fishery performance at the expected lower quotas, consideration of trip limit modifications may be warranted in the future. Scott MacDonald also mentioned that lowering the trip limits can make it harder to pack a truckload for shipment to the Massachusetts processor and lowering the trip limit could hurt vessels given high fuel prices. Thus, the Monitoring Committee did not see justification for recommending changes to the federal trip limit at this time.

Table 1. Whiteside/MacDonald Recommended Specifications

Specifications	2024 (pounds)	2024 (mt)	**Basis**
OFL (from SSC)	17,235,719	7,818	SS3 Assessment
ABC (from SSC)	15,729,964	7,135	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	15,650,597	7,099	= ABC – Canadian Landings
ACL	15,650,597	7,099	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	15,650,597	7,099	= ACL - mgmt uncert buffer
U.S. Discards	4,704,659	2,134	=2022 estimate
TAL	10,945,938	4,965	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	10,699,021	4,853	TAL – Rec Landings
Specifications	2025 (pounds)	2025 (mt)	**Basis**
OFL (from SSC)	17,570,821	7,970	SS3 Assessment
ABC (from SSC)	16,120,181	7,312	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,040,815	7,276	= ABC – Canadian Landings
ACL	16,040,815	7,276	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,040,815	7,276	= ACL - mgmt uncert buffer
U.S. Discards	4,704,659	2,134	=2022 estimate
TAL	11,336,156	5,142	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	11,089,239	5,030	TAL – Rec Landings
Specifications	2026 (pounds)	2026 (mt)	**Basis**
OFL (from SSC)	17,905,924	8,122	SS3 Assessment
ABC (from SSC)	16,475,125	7,473	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,395,759	7,437	= ABC – Canadian Landings
ACL	16,395,759	7,437	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,395,759	7,437	= ACL - mgmt uncert buffer
U.S. Discards	4,704,659	2,134	=2022 estimate
TAL	11,691,100	5,303	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	11,444,182	5,191	TAL – Rec Landings

Table 2. Specifications using 3-year average discards and no management uncertainty buffer.

Specifications	2024 (pounds)	2024 (mt)	**Basis**
OFL (from SSC)	17,235,719	7,818	SS3 Assessment
ABC (from SSC)	15,729,964	7,135	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	15,650,597	7,099	= ABC – Canadian Landings
ACL	15,650,597	7,099	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	15,650,597	7,099	= ACL - mgmt uncert buffer
U.S. Discards	6,896,051	3,128	2020-2021-2022 avg
TAL	8,754,546	3,971	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	8,507,629	3,859	TAL – Rec Landings
Specifications	2025 (pounds)	2025 (mt)	**Basis**
OFL (from SSC)	17,570,821	7,970	SS3 Assessment
ABC (from SSC)	16,120,181	7,312	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,040,815	7,276	= ABC – Canadian Landings
ACL	16,040,815	7,276	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,040,815	7,276	= ACL - mgmt uncert buffer
U.S. Discards	6,896,051	3,128	2020-2021-2022 avg
TAL	9,144,764	4,148	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	8,897,846	4,036	TAL – Rec Landings
Specifications	2026 (pounds)	2026 (mt)	**Basis**
OFL (from SSC)	17,905,924	8,122	SS3 Assessment
ABC (from SSC)	16,475,125	7,473	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,395,759	7,437	= ABC – Canadian Landings
ACL	16,395,759	7,437	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,395,759	7,437	= ACL - mgmt uncert buffer
U.S. Discards	6,896,051	3,128	2020-2021-2022 avg
TAL	9,499,708	4,309	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	9,252,790	4,197	TAL – Rec Landings

Table 3. Specifications using modeled discards and no management uncertainty buffer.

Specifications	2024 (pounds)	2024 (mt)	**Basis**
OFL (from SSC)	17,235,719	7,818	SS3 Assessment
ABC (from SSC)	15,729,964	7,135	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	15,650,597	7,099	= ABC – Canadian Landings
ACL	15,650,597	7,099	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	15,650,597	7,099	= ACL - mgmt uncert buffer
U.S. Discards	5,251,405	2,382	Assessment Predicted
TAL	10,399,193	4,717	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	10,152,275	4,605	TAL – Rec Landings
Specifications	2025 (pounds)	2025 (mt)	**Basis**
OFL (from SSC)	17,570,821	7,970	SS3 Assessment
ABC (from SSC)	16,120,181	7,312	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,040,815	7,276	= ABC – Canadian Landings
ACL	16,040,815	7,276	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,040,815	7,276	= ACL - mgmt uncert buffer
U.S. Discards	5,381,477	2,441	Assessment Predicted
TAL	10,659,338	4,835	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	10,412,420	4,723	TAL – Rec Landings
Specifications	2026 (pounds)	2026 (mt)	**Basis**
OFL (from SSC)	17,905,924	8,122	SS3 Assessment
ABC (from SSC)	16,475,125	7,473	SSC / Risk Policy
Canadian Landings	79,366	36	= 2019 estimate, most recent
Domestic ABC	16,395,759	7,437	= ABC – Canadian Landings
ACL	16,395,759	7,437	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	See discussion
Amount of buffer	0	0	
ACT	16,395,759	7,437	= ACL - mgmt uncert buffer
U.S. Discards	5,498,322	2,494	Assessment Predicted
TAL	10,897,437	4,943	ACT – Discards
U.S. Rec Landings	246,917	112	2020-2021-2022 avg
Comm Quota	10,650,519	4,831	TAL – Rec Landings

Table 4. 2023 Fishing Year Specifications.

Specifications	2023 (pounds)	2023 (mt)	**Basis for 2023 Specifications**
OFL (from SSC)	na	na	na
ABC (from SSC)	17,169,581	7,788	SSC
Canadian Landings	81,571	37	= 2019 estimate, most recent
Domestic ABC	17,088,010	7,751	= ABC – Canadian Landings
ACL	17,088,010	7,751	= Domestic ABC
Mgmt Uncert Buffer	0.0%	0.0%	Higher risk of ACL overages but minimizes potential 2023 disruption to industry
Amount of buffer	0	0	
ACT	17,088,010	7,751	= ACL - mgmt uncert buffer
U.S. Discards	4,603,247	2,088	scaled down from 2017-2019 average
TAL	12,484,763	5,663	ACT – Discards
U.S. Rec Landings	471,789	214	= 2021 estimate
Comm Quota	12,012,974	5,449	TAL – Rec Landings