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U.S. Southern New England Winter and Little Skate

**Final Report and Determination
January 28, 2021**

Conformity Assessment Body (CAB)	MRAG Americas, Inc.
Assessment team	Amanda Stern-Pirlot (team leader), Joseph Powers, Erin Wilson
Fishery client	Nebula Foods and Providence Bay Fish Co.
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2 Glossary

ABC	Acceptable Biological Catch
ACAP	Agreement on conservation of Albatross and Petrels
ACCOBAMS	Agreement on the Conservation of Small Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area
ACL	Annual Catch Limit
AP	Advisory Panel
ACT	Annual Catch Targets
APA	Administrative Procedures Act
AEWA	African-Eurasian Migratory Waterbird Agreement
ALWTRP	Atlantic Large Whale Take Reduction Plan
ASMFC	Atlantic States Marine Fisheries Commission
BSI	Biomass Survey Index
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMS	Conservation on Migratory Species
CoC	Chain of Custody
CZMA	Coastal Zone Management Act
DAM	Dynamic Area Management system
DAS	Days at Sea
EAFM	Ecosystem Approach to Fisheries Management
EBFM	Ecosystem-based Fisheries Management
EEZ	Exclusive Economic Zone
EFH	Essential Fish Habitat
ESA	Endangered Species Act
ETP	Endangered, Threatened and Protected species
FR	Federal Register
FMP	Fishery Management Plan
FOIA	Freedom of Information Act
GARFO	Greater Atlantic Regional Fisheries Office
HAPC	Habitats of Particular Concern
HCR	Harvest Control Rules
HPTRP	Harbor Porpoise Take Reduction Plan
HS	Harvest Strategy
IEA	Integrated Ecosystem Assessment
IFQ	Individual Fishing Quota
MAFMC	Mid-Atlantic Fisheries Management Council
MBTA	Migratory Bird Treaty Act
MMPA Marine	Mammal Protection Act
MPA	Marine Protected Area
MSFCMA	Magnuson-Stevens Fishery Conservation and Management Act
MSC	Marine Stewardship Council
MSE	Management Strategy Evaluation
MSRA	Magnuson-Stevens Reauthorization Act
MSY	Maximum Sustainable Yield
NEFMC	New England Fishery Management Council
NEFSC	North East Fisheries Science Center
NEPA	National Environmental Policy Act
NES LME	Northeast U.S. Continental Shelf Large Marine Ecosystem
NMFS	National Marine Fisheries Service
NOAA	National Oceanic Atmospheric Administration
OGC	Office of General Council
OLE	Office of Law Enforcement
PBR	Potential Biological Removal
PDT	Plan Development Team
PRA	Paperwork Reduction Act
PRI	Point where recruitment would be impaired

RFA	Regulatory Flexibility Act
RPA	Reasonable and Prudent Alternatives
SFPA	Shark Finning Prohibition Act
SOPP	Statement of Organization, Practices and Procedures
SSC	Science and Statistical Committee
TAC	Total Allowable Catch
TAL	Total Allowable Landings
UoA	Unit of Assessment
UoC	Unit of Certification
USCG	United States Coast Guard
VME	Vulnerable Marine Ecosystem
VTR	Vessel Trip Report

3 Executive summary

To be drafted at Announcement Comment Draft Report stage

To be completed at Public Certification Report stage

MRAG Americas was contracted by Nebula Foods and Providence Bay Fish Co. to undertake a fishery assessment for the U.S. Southern New England winter and Little skate fisheries. The Public Comment Draft Report sets out the results of the Marine Stewardship Council (MSC) assessment of the U.S. Atlantic Little skate (*Leucoraja erinacea*) and winter skate (*Leucoraja ocellata*) fisheries against the MSC Fisheries Standard. This is this fishery's first MSC assessment, however a similar fishery with the same geographical area and same species, Winter and Little skate, is MSC certified (see Section 12 on Harmonization). There are 4 Units of Assessment (UoAs); with the gear types of sink gillnet and bottom trawl assessed for both Winter and Little skate in the southern New England area. See Section 5 for further details on the UoAs.

The assessment site visit took place on August 4th and 5th remotely due to the COVID-19 outbreak. During that time, the assessment team met with scientists, fishery managers and stakeholders as well as client representatives. No written submissions were received ahead of the site visit by stakeholders.

The assessment was undertaken in accordance with the MSC Fisheries Certification Process v2.1, MSC Fisheries Standard v2.0/2.1, and using the MSC Guidance to MSC Fisheries Certification Requirements v2.3 which sets out the assessment and certification process. The default assessment tree contained within FCP v2.1 and FCR v2.0/2.01 were used to evaluate the fishery. As a result, to date, the following steps have been undertaken:

- Announcement of the assessment
- Appointment of the assessment team
- Notification on the use of the assessment tree
- Notification and undertaking of the site visit
- Production of the Client and Peer Review draft report that describes the background to the fishery, the fishery management operation and the evaluation procedure and results
- Response to Peer Review comments, and report revisions where necessary
- Production of the Public Comment Draft Report
- Response to stakeholder comments on the Public Comment Draft Report
- ~~• Review by MRAG Americas' qualified nominated Reviewer and Decision Maker~~
- ~~• Consultation on the Final Report and Determination~~
- ~~• Production of the Public Certification Report~~

The assessment of the fishery was undertaken by Amanda Stern-Pirlot (team leader) and covering Principle 2, Dr. Joseph Powers covering Principle 1, and Erin Wilson covering Principle 3 of the components of the MSC Standard, respectively.

The following strengths and weakness were identified with respect to each Principle:

Principle 1 Strengths:

The strengths related to Principle 1 are that the status of Winter Skate and Little Skate have been determined to not be overfished and not undergoing overfishing. Additionally, a harvest strategy and control rule have been implemented which establishes overall harvest goals and discard rules. Management procedures adjust for changes in biomass and catches relative to biomass threshold and targets when establishing Total Allowable Landings.

The status determinations are based on upon a survey biomass indices. The threshold and target biomass for the stocks of winter and little skates have been established in accordance with the historical dynamics over several decades taking into account the catch history.

The Little skate status criteria are based on the NEFSC spring survey. The 3-year moving average of the Little skate biomass index has been above the threshold for the entire time series and has fluctuated around the target for approximately the last two decades. For Little skate, the 2017-2019 NEFSC spring

average biomass index of 5.32 kg/tow was above the biomass threshold reference point (3/07 kg/tow) but below the B_{MSY} proxy (6.15 kg/tow). The 2017-19 average index was above the previous average (2016-2018) by 13.4%. This stock is not overfished, and overfishing is not occurring.

The Winter skate status criteria are based on the NEFSC fall survey. The 3-year moving average of the Winter skate biomass index was below the threshold in 1995 and approached the threshold in 2006. However, the index has been fluctuating around the target for approximately the last 12 years. Under the current definition, a stock of skates is designated as overfished when the three-year moving average of the NEFSC survey index is less than $B_{THRESHOLD}$, the survey index estimates of the recommended biomass-based reference points (NEFSC 2019). Overfished status determinations are made by comparing the survey index estimates to the recommended biomass-based reference points (NEFMC 2017).

For Winter skate, the 2017-2019 NEFSC fall average biomass index of 8.61 kg/tow is above the biomass threshold reference point (2.83 kg/tow) and above the B_{MSY} proxy (5.66 kg/tow). The 2017-2019 average index is above the 2016-2018 index by 19.2% (NEFSC 2020).

The HCR is a well-defined management procedure in which ABC, ACL and ACT are defined through formulae formalized in the FMP in which catches are derived from the median catch/biomass exploitation ratio for time series and the three-year average stratified mean biomass for skates, using the fall survey data for Winter Skate and other skate species. Under the rule as the biomass index declines and approaches or exceeds the threshold, the catch levels are reduced, and catches are reduced more sharply if thresholds are exceeded. Catch levels are adjusted through the Council process of setting ABC, ACT specifications, which includes peer-review by the Council's Scientific and Statistical Committee.

Therefore, through pragmatic management the HS and HCR are working to maintain the stock above the conservation threshold and fluctuating around the management target.

Principle 1 Weaknesses:

Previous scientific reviews have shown that the current procedure is based on a survey index. Status determinations are derived from the survey and the HCR also is based on the survey. At the time of the review, it was determined that biological information (growth, mortality, maturity, size frequency, species-specific catches) was insufficient to conduct more analytical, statistical stock assessments. Therefore, it was determined that the HCR would determine catch limits for the skate complex, rather than individual stocks. These are weaknesses for Principle 1.

While non-analytical assessments are acceptable within the MSC framework, there are inherent uncertainties in the thresholds and targets that were established and how they relate to potential stock productivity (MSY). The question of their appropriateness has not been scientifically revisited for about a decade.

Also, the aggregate stock management procedure (TAL's for the skate complex rather than individual stocks) can allow individual stocks to suffer disproportionately. This does not appear to have occurred for the skate stocks (Winter skate and Little skate). Proportions of these stocks in the catch have been variable but have not shown a declining trend, although this could still occur in the future.

Principle 2 Strengths:

There is exceptionally good information about habitat distributions, vulnerability, and interactions with and impacts of fisheries in the area of operation of these UoAs. In addition, all main primary species caught by this fishery are above biologically based limits, and none are considered to be experiencing overfishing.

Principle 2 Weaknesses:

Although there are good comprehensive federal strategies to mitigate bycatch in fisheries, including of ETP species and seabirds, the priority areas for action under this strategy in the Northeast are primarily around

issues not relevant to the UoA fisheries, thus specific targeted research and management of bycatch in the gillnet and trawl fisheries is lacking.

Principle 3 Strengths:

The Winter and Little skate fishery has strong management objectives and clearly stated goals in the Northeast Skate Complex FMP. The decision-making processes are clear, and the consultation process, roles and responsibilities are explicitly defined and transparent.

Principle 3 Weaknesses: The main weaknesses are found in the monitoring and management performance evaluation. There is currently no external review of the fishery-specific management system. There is also some uncertainty with enforcement actions, specifically if the sanctions in place for the management system are applied consistently and provide effective deterrence.

No issues were identified at this stage that would prevent the fishery from achieving MSC certification.

4 Report details

4.1 Authorship and peer review details

To be drafted at Announcement Comment Draft Report stage

Peer reviewer information to be completed at Public Comment Draft Report stage

A discussion between team members regarding conflict of interest and biases was held and none were identified.

The team members will include Ms. Amanda Stern-Pirlot (team leader), Dr. Joseph Powers and Ms. Erin Wilson. The teams' bios are as follows:

Ms. Amanda Stern-Pirlot will serve as team leader for the assessment. Amanda is an M.Sc graduate of the University of Bremen, Center for Marine Tropical Ecology (ZMT) in marine ecology and fisheries biology. Ms. Stern-Pirlot joined MRAG Americas in mid-June 2014 as MSC Certification Manager (now Director of the Fishery Certification Division) and is currently serving on several different assessment teams as team leader and team member. She has worked together with other scientists, conservationists, fisheries managers and producer groups on international fisheries sustainability issues for over 15 years. With the Institute for Marine Research (IFM-GEOMAR) in Kiel, Germany, she led a work package on simple indicators for sustainable within the EU-funded international cooperation project INCOFISH, followed by five years within the Standards Department at the Marine Stewardship Council (MSC) in London, developing standards, policies and assessment methods informed by best practices in fisheries management around the globe. Most recently she has worked with the Alaska pollock industry as a resources analyst, within the North Pacific Fisheries Management Council process, focusing on bycatch and ecosystem-based management issues, and managing the day-to-day operations of the offshore pollock cooperative. She has co-authored a dozen publications on fisheries sustainability in the developing world and the functioning of the MSC as an instrument for transforming fisheries to a sustainable basis.

Ms. Erin Wilson joined MRAG Americas, Inc. in February 2015, where she currently works as a Senior Fisheries Consultant. She has collaborated as a team member on several MSC assessments, including North and South Pacific albacore tuna fishery, US West Coast Groundfish fishery, and is team leader for all the Alaska Groundfish fisheries. She provides routine audit services for the International Seafood Sustainability Foundation (ISSF) and is the MRAG Project Manager for the ISSF ProActive Vessel Registry (PVR). Prior to joining MRAG Americas, she spent 2 years working at the Oregon Department of Fish and Wildlife (ODFW) as a Natural Resource Specialist and Biological Technician for the Oregon Marine Reserves. She has collaborated on a multitude of projects that focus on marine science and conservation in both a biological and social science aspect. She received a M.Sc. in Marine Resource Management from Oregon State University and a B.S. in Zoology from Colorado State University, along with a Spanish minor.

Dr. Joseph E. Powers has been involved in fisheries issues for more than 40 years, conducting stock assessments, coordinating international stock assessment research, communicating scientific advice to fishery management councils and commissions and also serving as the senior marine fisheries manager in the southeast US. His background includes: professor of marine resource assessment at Louisiana State University; Senior Stock Assessment Scientist of the US's National Marine Fisheries Service (NMFS) southeast region, Laboratory Director of a NMFS facility; lead US scientist for Atlantic tuna, swordfish and billfish species for the International Commission for the conservation of Atlantic Tunas (ICCAT); Chair of the Scientific Committee of ICCAT; Chair of the Stock Assessment Committee for Southern Bluefin Tuna; Chair of the Scientific Committee of the Gulf of Mexico Fisheries Management Council and he has worked on numerous Marine Stewardship Council assessments of tunas, swordfish, hake and other fisheries resources in the Atlantic, Pacific and Indian Oceans.

Peer Reviewers:

There were three peer reviewers selected for the assessment of the Southern New England Winter and Little skate fishery. The full shortlist of the peer reviewers is included below.

Matthew Cieri

Dr Matthew Cieri is a graduate of the University of Maine where he received a PhD in Biological Oceanography studying the migrations of larval and juvenile American eel. After completing a post doctoral fellowship at the Marine Biological Laboratory in Woods Hole Massachusetts USA, Dr Cieri started his fisheries career in 2001 working at the Maine Department of Marine Resources (MEDMR) where he is still employed full-time. His current focus is working on small pelagic fish stock assessment, trophic interactions, monitoring, and management analysis, though he has since branched out into Groundfish as well as other species.

As a consultant since 2011, Dr Cieri has done work for a variety of clients including analyses for the Sustainable Fisheries Partnership, peer reviews of US stock assessments and methods for the Center for Independent Experts, reports for consumers for Seafood Watch, and Marine Stewardship Council work with ME Certification. Through his work at MEDMR and as a consultant, he continues to explore the interesting and connected fields of fishery stock assessment, trophic relations between small pelagic and groundfish stocks, and fisheries sustainability.

Pat Livingston

Pat Livingston has over 38 years experience working in developing and reviewing scientific advice for quantitative fishery management, primarily in federal fisheries off Alaska. She has worked on and published information to advance ecosystem approaches to fishery management both through the development and improvement of ecosystem models and information and in the development of a structured framework for bringing ecosystem information to the fishery management system. She also has experience on regional, national, and international working groups that have reviewed fishery management policies for improvement. She served as a scientific and technical reviewer for the North Pacific Fisheries Management Council and served on the US national SSC committee. Ms Livingston's experience with MSC has been as a stakeholder/scientist for AFSC, providing scientific information and coordination of information being presented to MSC assessment teams. More recently, she completed the MSC Level 2 Capacity Building Workshop (Oct 2016), passed the Technical Consultant online assessment, and has been involved in a Pre-Assessment for a fishery in Santa Rosalia, Mexico.

Susan Hanna

Dr Susan Hanna is professor emeritus of marine economics at Oregon State University. Her research and publications are in the area of marine economics and policy, with an emphasis on fishery management, ecosystem-based fishery management, property rights and institutional design. Dr Hanna has served as a scientific advisor to the U.S. Commission on Ocean Policy, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Minerals Management Service, Northwest Power and Conservation Council and the Pacific Fishery Management Council. She served on the Ocean Studies Board of the National Research Council (NRC), National Academy of Sciences, and several NRC Committees, including the Committee to Review Individual Quotas in Fisheries and the Committee on Protection and Management of Pacific Northwest Anadromous Salmonids. She has conducted reviews for the Center for Independent Experts (CIE) and is a current member of the CIE Steering Committee. Dr

Hanna has been a member of Marine Stewardship Council assessment teams for West Coast Dungeness crab, Oregon pink shrimp, West Coast groundfish, Alaska Pollock, Alaska flatfish, and Alaska Pacific cod fisheries, and has served as a peer reviewer of several MSC assessment reports.

Terence James Holt

Dr Terry Holt is an independent marine environmental, with longstanding experience of managing marine consultancy projects, assessments and surveys. He holds a BSc. degree in Marine biology and a Ph.D. in Seaweed Cultivation. He is a former director of CMACS Ltd and Niras Consulting Ltd, and has over 35 years' experience in seabed ecology, including shellfish ecology, marine aquaculture (both research and commercial), fish and invertebrate surveys including scallops and other commercial shellfish, seabed surveys including trawl, dredge, grab, pots, camera and acoustic, and a variety of environmental impact assessments. He has provided expert advice on molluscan fisheries at planning enquiries and has published on trawl damage to seabed communities and on sensitivities of biogenic reef habitats. Dr Holt has been involved in MSC pre-assessments, main assessments, annual audits and peer reviews for queen scallops, mussels, cockles, clams and oysters in Europe, Canada and South east Asia since 2001, and has also contributed to pre- and full assessments of longline and trawl fisheries. He contributed at early MSC workshops on the development of generic scoring guidelines and refining of assessment method. In 2000 he carried out a preliminary assessment of a number of U.S. aquarium fish wholesalers and retailers against draft sustainability standards on behalf of MAC (Marine Aquarium Council). He has also carried out assessments of fishing vessels/crew under the UK Sea Fish Industry Authority's Responsible Fishing Scheme and passed the training course for the MSC's recently released standards for seaweed certification.

4.2 Version details

To be drafted at Announcement Comment Draft Report stage

The full assessment for this fishery will use MSC Fisheries Certification Process v2.1, MSC Fisheries Standard v2.01, MSC General Requirements v2.4.1 and MSC Reporting Template v1.1.

Table 1 Fisheries program documents versions

Document	Version number
MSC Fisheries Certification Process	Version 2.1
MSC Fisheries Standard	Version 2.01
MSC General Certification Requirements	Version 2.4.1
MSC Reporting Template	Version 1.1

5 Unit(s) of Assessment and Certification and results overview

5.1 Unit(s) of Assessment and Unit(s) of Certification

5.1.1 Unit(s) of Assessment

To be drafted at Announcement Comment Draft Report stage

MRAG Americas has confirmed that this fishery is within scope for MSC fisheries certification through the following determinations (FCP v2.1:7.4):

7.4.2.1 The following taxa are not target species under Principle 1:

- a. Amphibians

- b. Reptiles
 - c. Birds
 - d. Mammals
- 7.4.2.2 The fishery does not use poisons or explosives
- 7.4.3 The fishery is not conducted under a controversial unilateral exemption to an international agreement.
- 7.4.4 No member of the client group has been successfully prosecuted for a forced or child labour violation in the last 2 years.
- 7.4.5 There is a mechanism for resolving disputes and no overwhelming disputes for the fishery to prevent it from meeting the MSC Fisheries Standard.

In addition, this is not an enhanced fishery, or a fishery based on introduced species.

Originally, this assessment included 6 total Units of Assessment (UoAs), including bottom trawl, sink gillnets and longline for both Winter and Little skate. After further review of this fishery, this skate fishery predominantly deals with skate wings and does not receive deliveries from longline vessels. Thus, the longline UoA for winter and little skate were not assessed in this assessment.

Table 2 Unit(s) of Assessment (UoA)

UoA 1	Description
Species	Little skate (<i>Leucoraja erinacea</i>)
Stock	Atlantic stock
Geographical area	State and federal waters off the Northeast Atlantic coast of the U.S.A.
Harvest method / gear	Northeast bottom trawl (all mesh sizes)
Client group	Nebula Foods and Providence Bay Fish Co.
Other eligible fishers	N/A. No other eligible fishers.
UoA 2	Description
Species	Little skate (<i>Leucoraja erinacea</i>)
Stock	Atlantic stock
Geographical area	State and federal waters off the Northeast Atlantic coast of the U.S.A.
Harvest method / gear	Sink gillnet
Client group	Nebula Foods and Providence Bay Fish Co.
Other eligible fishers	N/A. No other eligible fishers.
UoA 3	Description
Species	Winter skate (<i>Leucoraja ocellata</i>)

Stock	Atlantic stock
Geographical area	State and federal waters off the Northeast Atlantic coast of the U.S.A.
Harvest method / gear	Bottom trawl (all mesh sizes)
Client group	Nebula Foods and Providence Bay Fish Co.
Other eligible fishers	N/A. No other eligible fishers.
UoA 4	Description
Species	Winter skate (<i>Leucoraja ocellata</i>)
Stock	Atlantic stock
Geographical area	State and federal waters off the Northeast Atlantic coast of the U.S.A.
Harvest method / gear	Northeast sink gillnet
Client group	Nebula Foods and Providence Bay Fish Co.
Other eligible fishers	N/A. No other eligible fishers.

5.1.2 Unit(s) of Certification

To be drafted at Client and Peer Review Draft Report stage

To be completed at Public Certification Report stage

Table 3 Units of Certification (UoC)

UoA 1	Description
Species	Little skate (<i>Leucoraja erinacea</i>)
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Bottom trawl (all mesh sizes)
Client group	Nebula Foods and Providence Bay Fish Co.
Other eligible fishers	N/A. No other eligible fishers.
UoA 2	Description
Species	Little skate (<i>Leucoraja erinacea</i>)

Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Gillnet (Anchor/Drift and sink float gillnets included)
Client group	Nebula Foods and Providence Bay Fish Co.
Other eligible fishers	N/A. No other eligible fishers.
UoA 3	Description
Species	Winter skate (<i>Leucoraja ocellata</i>)
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Bottom trawl (all mesh sizes)
Client group	Nebula Foods and Providence Bay Fish Co.
Other eligible fishers	N/A. No other eligible fishers.
UoA 4	Description
Species	Winter skate (<i>Leucoraja ocellata</i>)
Stock	Atlantic stock
Geographical area	State and federal waters off the Atlantic coast of the U.S.A.
Harvest method / gear	Gillnet (Anchor/Drift and sink float gillnets included)
Client group	Nebula Foods and Providence Bay Fish Co.
Other eligible fishers	N/A. No other eligible fishers.

5.2 Assessment results overview

5.2.1 Determination, formal conclusion and agreement

To be drafted at Final Draft Report

To be completed at Public Certification Report

As this fishery is in scope for MSC certification and achieves at least a 60 score for each Performance Indicator, and at least an 80 score for each Principle, MRAG Americas has determined that it should be certified as sustainable according to the MSC Fisheries Standard. Note this is a draft determination and not a final certification decision.

5.2.2 Principle level scores

To be drafted at Client and Peer Review Draft Report

Table 4 Principle level scores

Principle	UoA 1	UoA 2	UoA 3	UoA 4
Principle 1 – Target species	87.5		87.5	
Principle 2 – Ecosystem impacts	83.3	83.3	83.3	83.3
Principle 3 – Management system	90.0			

5.2.3 Summary of conditions

To be drafted at Client and Peer Review Draft Report

Table 5 Summary of conditions

Condition number	Condition	Performance Indicator (PI)	Related to previous condition?
1	Evidence shall be presented to show that here is an adequate assessment of the stock status for both winter and little skate that takes uncertainty into account (1.2.4.c). Additionally, the assessment shall be appropriate for both the stock and for the harvest control rule; and estimates stock status relative to reference points that are appropriate to the stock; and can be estimated.	1.2.4	NA
2	By year 4, evidence needs to be provided that the fishery-specific management system is subject to occasional external review.	3.2.4	NA

5.2.4 Recommendations

To be drafted at Client and Peer Review Draft Report stage

Recommendation 1 for PI 2.3.1:

Because there is uncertainty related to the potential for the Northeast fisheries to interact with sea turtles having primarily a more southerly distribution as described above, it would be useful, particularly in light of potential climate change impacts on foraging distributions for these turtles, to gain a better understanding of trends in interactions from the fishing fleet in the Northeast. It is thus recommended that the client provides the assessment team with an opportunity to meet with gillnet vessel operators to discuss this issue during the first annual audit and subsequently, in order to qualitatively verify the validity of assumptions made

above regarding relative impacts in the Northeast (UoA) vs Mid-Atlantic and Southeast components of this fishery.

6 Traceability and eligibility

6.1 Eligibility date

This fishery's eligibility date will be the date of publication of the Public Comment Draft report, December 17, 2020. This is the earliest possible eligibility date, and we are confident the traceability and segregation systems are in place and appropriately implemented.

6.2 Traceability within the fishery

To be drafted at Announcement Comment Draft Report stage

To be completed at Public Certification Report stage

Table 6 Traceability within the fishery

Factor	Description
<p>Will the fishery use gears that are not part of the Unit of Certification (UoC)?</p> <p>If Yes, please describe:</p> <ul style="list-style-type: none"> - If this may occur on the same trip, on the same vessels, or during the same season; - How any risks are mitigated. 	<p><i>No. The main gear types evaluated in this fishery (northeast sink gillnet, and northeast bottom trawl) account for all commercial landings to the client group processing facility, noting that there are some longline landings of skate as well, but the client group never takes deliveries from the longline fleet. Existing regulatory or fishery management controls: All federally permitted vessels are required to complete their VTR which includes information on gear type used. The dealer reports also includes information on gear type, which would allow the client group to identify if the product is not from the UoA.</i></p>
<p>Will vessels in the UoC also fish outside the UoC geographic area?</p> <p>If Yes, please describe:</p> <ul style="list-style-type: none"> - If this may occur on the same trip; - How any risks are mitigated. 	<p><i>The UoA encompasses the entire range of the northeast fishery including both US state and federal waters and the UoC is not delineated geographically, so we assume this question to be about the UoA area. The only potential for vessels from the UoA to fish outside the UoA would be for the vessels to fish outside of the US waters, for example in Canada. This is considered an extremely highly unlikely scenario. The mitigation measure in place are national regulations prohibiting US vessels from fishing in Canadian waters.</i></p>
<p>Do the fishery client members ever handle certified and non-certified products during any of the activities covered by the fishery certificate? This refers to both at-sea activities and on-land activities.</p>	<p><i>The fishery client group members are skate wing processors and traders. They receive whole skate or skate wings at the unloading doc where they are taken in and processed. The processing facility may also process other fish species, but processing falls outside of the scope of the</i></p>

<ul style="list-style-type: none"> - Transport - Storage - Processing - Landing - Auction <p>If Yes, please describe how any risks are mitigated.</p>	<p><i>fishery certificate and the processing facility has a separate Chain of Custody certificate.</i></p> <p><i>Vessels delivering to the client group facility normally cut skates on board on their way back to land, providing the wings only to the plant, and selling other skate parts elsewhere for bait, etc. There are no risks of mixing between non certified and certified products during this on-board cutting (rough processing), as the two species that are difficult to distinguish (winter and little skate) are both included in the UoA. Non-UoA skate species are readily visually distinguishable and of these, only Barndoor skates are ever landed at the client processing facility, and only rarely.</i></p>
<p>Does transshipment occur within the fishery?</p> <p>If Yes, please describe:</p> <ul style="list-style-type: none"> - If transshipment takes place at-sea, in port, or both; - If the transshipment vessel may handle product from outside the UoC; - How any risks are mitigated. 	<p><i>No, transshipment does not occur within the fishery.</i></p>
<p>Are there any other risks of mixing or substitution between certified and non-certified fish?</p> <p>If Yes, please describe how any risks are mitigated.</p>	<p><i>The risk of substitution between fish from the UoA and fish from outside this unit before Chain of Custody is minimal because the UoA comprises the entire commercial landings of Winter skate and little skate from the gear types that deliver to the UoC client group facility. Existing regulatory or fishery management controls, as noted previously the VTR requirements provide information on gear type and fishing areas, which provide the information that allows to trace product back to the UoA.</i></p>

6.3 Eligibility to enter further chains of custody

To be drafted at Announcement Comment Draft Report stage

To be completed at Public Certification Report stage

The team has concluded and determined that the product originating from the UoC is eligible to enter further certified chains of custody and be sold as MSC certified or carry the MSC ecolabel. The point of intended change of ownership of product is the first sale from a vessel, to the client group processing facility (Nebula Foods).

Nebula Foods holds a federal dealer permit, allowing them to buy product directly from a vessel, either at a client group facility or at a remote offloading site. In these cases, the change of ownership takes place when the product is offloaded from the vessel and Chain of Custody commences at that point. When processing plants that are part of the client group (only Nebula foods presently), purchase product from an external federally licensed dealer, the fishery certificate will cover such dealer activities. In this case CoC

will begin at the point of change of ownership from the dealer to a member of the client group. A current list of federally permitted dealers can be found here

<https://www.greateratlantic.fisheries.noaa.gov/aps/permits/data/index.html>. Dealer activities here refer to the receipt of product for commercial purposes involving the material handling of fish to add value to the product, including transportation and preservation (i.e., freezing). Processing, other than cutting skate wings on board, is not covered in the fishery certificate.

The team considers that the dealer operations described above don't require CoC because the transfer of product to a dealer presents an extremely low to negligible risk that volume of non-UoA product is landed. The current UoA includes both commercial gears across both state and federal waters that land to this processing facility. There are in place mitigations measures to address this traceability risks and which can be used by the client group to demonstrate provenance back to the UoA, and Nebula foods (a permitted dealer) almost always buys directly from the fishing vessels from which it sources. The two main measures are: (1) federally permitted vessels may only sell their catch of federally managed species to federally permitted dealers and (2) federally permitted dealers are required report trip-level reports for all species purchases on a weekly basis to NOAA Fisheries Service which includes the Vessel Trip Report (VTR) serial number. The client group members are able to demonstrate provenance to the UoC(s) with the use of the VTR.

Only product sourced from vessels with state or federal permits to catch Winter and Little skate employing the following gear types may enter Chain of Custody:

- Northeast sink gillnet
- Northeast bottom trawl (All mesh sizes)

The client group members are required to demonstrate provenance back to the UoA by providing documentation that the product was sourced from vessels employing the permitted gear types described above. This information may be provided from the dealer report.

6.4 Eligibility of Inseparable or Practicably Inseparable (IPI) stock(s) to enter further chains of custody

To be drafted at Announcement Comment Draft Report stage

To be completed at Public Certification Report stage

No IPI stocks were identified.

7 Scoring

7.1 Summary of Performance Indicator level scores

Southern New England Little and Winter skate fishery							
Principle	Component	Wt	Performance Indicator (PI)		Wt	Gillnet	Trawl
One	Outcome	0.333	1.1.1	Stock status	1.0	100	100
	Management	0.667	1.2.1	Harvest strategy	0.25	85	85
			1.2.2	Harvest control rules & tools	0.25	85	85
			1.2.3	Information & monitoring	0.25	80	80
			1.2.4	Assessment of stock status	0.25	75	75
Two	Primary species	0.2	2.1.1	Outcome	0.333	80	80
			2.1.2	Management strategy	0.333	90	90
			2.1.3	Information/Monitoring	0.333	85	85
	Secondary species	0.2	2.2.1	Outcome	0.333	85	85
			2.2.2	Management strategy	0.333	85	85
			2.2.3	Information/Monitoring	0.333	85	85
	ETP species	0.2	2.3.1	Outcome	0.333	85	85
			2.3.2	Management strategy	0.333	85	85
			2.3.3	Information strategy	0.333	80	80
	Habitats	0.2	2.4.1	Outcome	0.333	80	80
			2.4.2	Management strategy	0.333	85	85
			2.4.3	Information	0.333	80	80
	Ecosystem	0.2	2.5.1	Outcome	0.333	80	80
			2.5.2	Management	0.333	80	80
			2.5.3	Information	0.333	85	85
Three	Governance and policy	0.5	3.1.1	Legal &/or customary framework	0.333	100	100
			3.1.2	Consultation, roles & responsibilities	0.333	100	100
			3.1.3	Long term objectives	0.333	100	100
	Fishery specific management system	0.5	3.2.1	Fishery specific objectives	0.25	80	80
			3.2.2	Decision making processes	0.25	90	90
			3.2.3	Compliance & enforcement	0.25	80	80
			3.2.4	Monitoring & management performance evaluation	0.25	70	70
				Overall weighted Principle-level scores		Score	
				Principle 1 - Target species		87.5	
				Principle 2 - Ecosystem		83.3	83.3
				Principle 3 - Management		90.0	

8 Principle 1

8.1 Principle 1 background

The seven species in the Northeast US coast (Maine to Virginia) skate complex are distributed along the coast of the northeast United States from near the tide line to depths exceeding 700 m (383 fathoms). The species are Little skate (*Leucoraja erinacea*), winter skate (*L. ocellata*), barndoor skate (*Dipturus laevis*), thorny skate (*Amblyraja radiata*), smooth skate (*Malacoraja senta*), clearnose skate (*Raja eglanteria*), and rosette skate (*L. garmani*). In this Northeast region, the center of distribution for the Little and winter skates is Georges Bank and Southern New England. The barndoor skate is most common in the Gulf of Maine, on Georges Bank, and in Southern New England. The thorny and smooth skates are commonly found in the Gulf of Maine. The clearnose and rosette skates have a more southern distribution and are found primarily in Southern New England and the Chesapeake Bight. Skates are not known to undertake large-scale migrations, but they do move seasonally in response to changes in water temperature, moving offshore in summer and early autumn and returning inshore during winter and spring. Members of the skate family lay eggs that are enclosed in a hard, leathery case commonly called a mermaid's purse. Incubation time is 6 to 12 months, with the young having the adult form at the time of hatching (NEFSC 2006, NEFMC 2003, 2017).

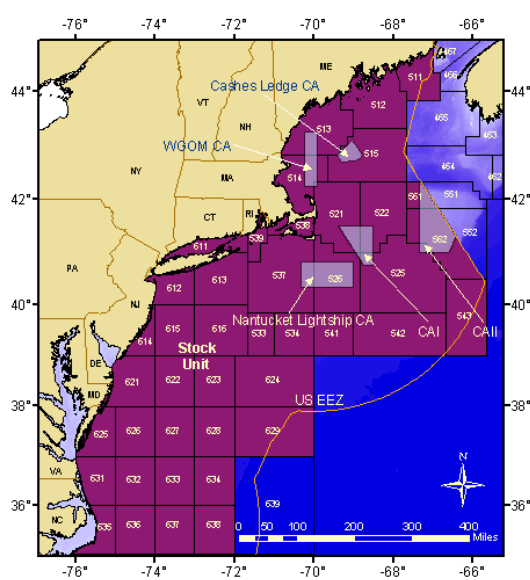


Figure 1 Statistical areas used to define Winter and Little skate stock. NEFSC 2006

Maturity information was available in some form for all species to split the survey length-frequency into mature and immature animals. The series chosen for each species was the same as chosen for reference points (see below). There is a protracted spawning as females likely lay develop eggs year-round so there is no need to pick a season based on spawning time. (NEFSC 2006).

8.1.1 Stock Assessment and Status

The first stock assessment for the skate complex was conducted in 1999 at Northeast Fisheries Science Center. At that time there was no Fishery Management Plan (FMP) in place. The National Marine Fisheries Service had been petitioned to list barndoor skate as endangered and was also asked to assess the other species in the complex. That assessment found no cause to list barndoor as endangered but recommended that the species remain on the candidate species list as well as to put thorny skate on the candidate species list. Biomass reference points were developed for all seven species and four were listed

as overfished (not Winter skate or Little skate). Fishing mortality reference points were developed for Winter and Little skate and at that time it was determined that overfishing was occurring for winter skate.

Subsequently, the stock assessment approach for winter and Little skate was based on a Data Poor Stocks Workshop (NEFSC 2009). A number of alternative methods were examined at that workshop. These included SPR-based reference points for Barndoor, Winter, and Thorny skates derived from life-history parameters and fitted Beverton-Holt stock recruit relationships. However, this was not feasible for Winter skate. Basic growth, mortality and maturity information for winter skate used was $K=0.1$, $M=0.15$ and age of maturity of 9.5-12.5. In comparison, estimates for Little skate were approximately $K=0.16$ and age of maturity from 7.5 to 9.5 years

Table 7 . Estimates of Beverton-Holt parameters, and implied annual survival ($S_{egg}S_0...S_{r-1}$)/ r for the product of total number of eggs per female per year and cumulative survival to recruitment, $S_{egg}S_0...S_{r-1}$. (NEFSC 2009).

Parameter	Barndoor	Thorny	Winter	Clearnose
a (slope at origin)	5.78 (0.50)	2.71 (0.31)	2.94 (0.39)	19.01 (0.65)
K	0.01 (1.65)	0.08 (0.48)	0.10 (0.52)	0.01 (0.80)
E (Total Number of	80	41	48	40
$S_{egg}S_0...S_{r-1}$	0.07	0.03	0.04	0.24
$(S_{egg}S_0...S_{r-1})^{1/r}$	0.27	0.51	0.50	0.83

Table 8 Species specific reference points (and CV) for the assumed natural mortality rate (M), the estimated maximum lifetime reproduction (α) and the implied steepness (NEFSC 2009).

Parameter	Barndoor	Thorny	Winter	Clearnose
M (natural mortality)	0.18	0.18	0.15	0.15
$\hat{\alpha}$	15.61 (0.50)	4.67 (0.31)	7.39 (0.39)	101.10 (0.33)
steepness	0.80	0.54	0.65	0.96
SPR_{MER}	0.25 (0.25)	0.46 (0.16)	0.37 (0.19)	N/A
S_{MER}/S_0	0.20 (0.20)	0.32 (0.11)	0.27 (0.14)	N/A

In general, the alternative models were found to be unsatisfactory. Therefore, biological reference points for Winter and Little skate were based upon indices of biomass taken from resource surveys, as per the suggestions of the Data Poor Workshop. The status determination for each of the species in the skate complex was based on an appropriate index of biomass abundance, with threshold and target levels based upon the history of the index, the history of catches and other external information. That process has been carried over to the present time. Figure 2 provides the most current trajectories of the survey biomass indices which are used for status determination (NEFSC 2020).

The surveys described in (NEFSC 2020) are spatially stratified with the spatial strata used in an individual skate species index unique to that species. In the case of the spring survey for little skate the spatial strata were: Offshore 1-30, 34-40, 61-76, Inshore 2,5,8,11,14,17,20,23,26,29,32,35,38,41,44-46,56,59-61,64-66. The time series used for defining the Bmsy proxy was 1982-2008 and the CV for defining overfishing was -20% (i.e. if the 3-year running average decreased by 20% or greater the stock was determined to be undergoing overfishing. The fall survey spatial strata for winter skate were: Offshore 1-30, 34-40, 61-76; the time series for defining Bmsy was 1967-2007 and the CV overfishing criteria was -20%. Over the years, calibrations have been estimated to account for changes in survey vessels and to account for missing strata due to weather, ship availability due to repairs and other issues. However, sampling has been relatively consistent over the last 10 to 20 years based on these data.

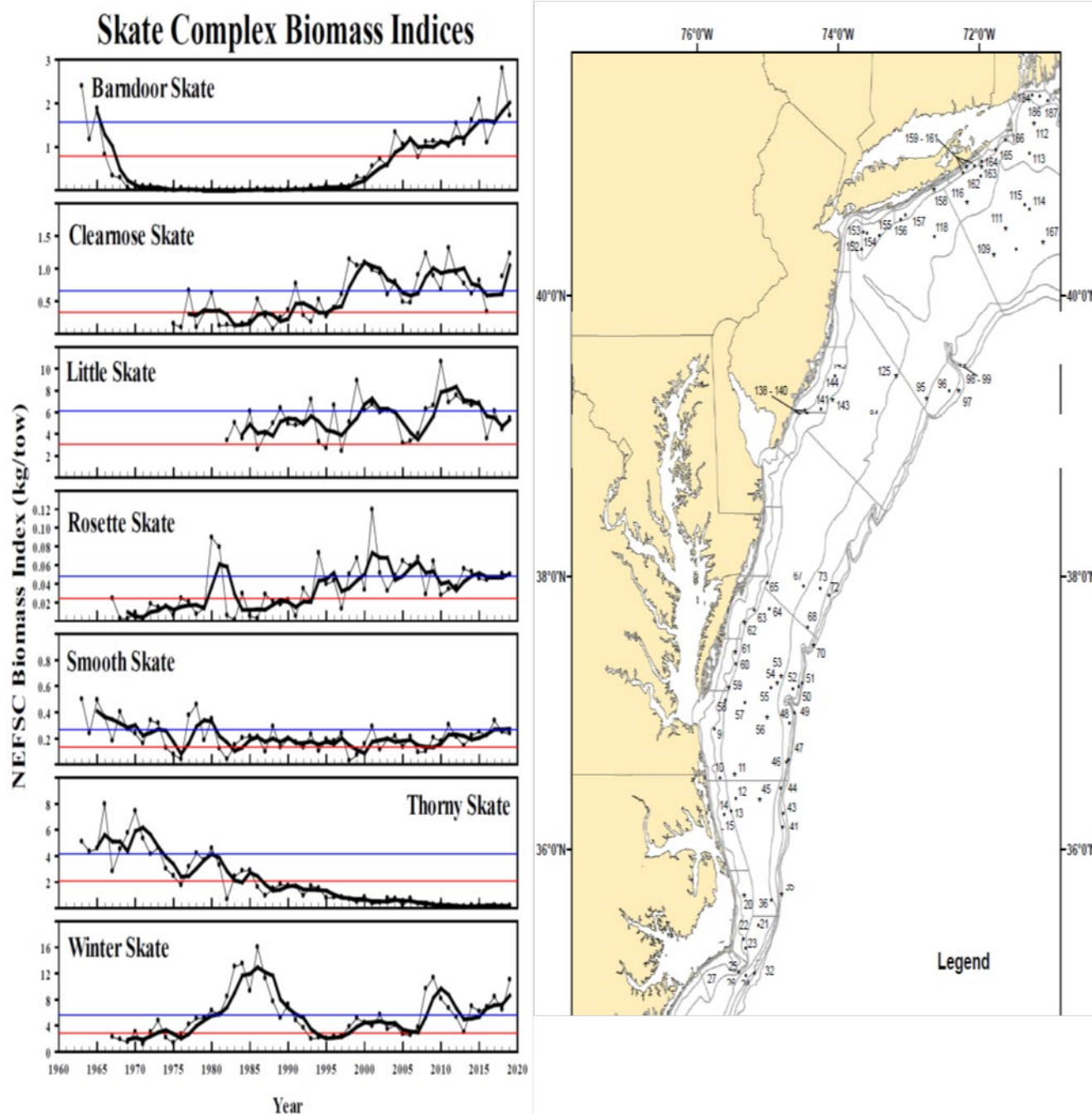


Figure 2 Left Panel: NEFSC survey biomass indices (kg/tow). Thin lines with symbols are annual indices, thick lines are 3-year moving averages, and the thin horizontal lines are the biomass thresholds and targets. Right Panel: Map showing station locations.

Table 9 Winter and Little Skate Status Determination Criteria NEFMC 2020

Table 9 Winter and Little Skate Status Determination Criteria NEFMC 2020		Winter Skate	Little Skate
Overfished Definition	When the 3-year moving average of the spring/fall survey mean weight per tow is less than one-half of the 75th	Not Overfished	Not Overfished

	percentile of the mean weight per tow observed in the fall/spring		
Overfishing Definition	If the three-year moving average of the survey biomass index for a skate species declines by more than the average CV of the survey time series, then fishing mortality is assumed to be greater than F_{MSY} and overfishing is occurring	Not Overfishing	Not Overfishing
Current Survey		8.61 kg/tow	5.32 kg/tow
Survey Threshold		2.83 kg/tow	3.07 kg/tow
Survey Target		5.66 kg/tow	6.15 kg/tow

B/BMSY Proxy	
Biomass (2016)	5.35 kg/tow

Status Determination Criteria

Overfished definition (overfished threshold) for both Little and Winter skate is “When the 3-year moving average of the spring/fall survey mean weight per tow is less than one-half of the 75th percentile of the mean weight per tow observed in the spring/fall trawl survey from the selected reference time series” (NEFMC 2017, NEFSC 2019). The fishing target is based on the mean weight per tow for the respective survey. Fishing mortality reference points are based on changes in survey biomass indices. If the three-year moving average of the survey biomass index for a skate species declines by more than the average CV of the survey time series, then fishing mortality is assumed to be greater than F_{MSY} and overfishing is occurring.

The Little skate status criteria are based on the NEFSC spring survey.

The 3-year moving average of the Little skate biomass index has been above the threshold for the entire time series and has fluctuated around the target for approximately the last two decades. For Little skate, the 2017-2019 NEFSC spring average biomass index of 5.32 kg/tow was above the biomass threshold reference point (3.07 kg/tow), but below the B_{MSY} proxy (6.15 kg/tow). The 2017-19 average index was above the previous average (2016-2018) by 13.4%. This stock is not overfished, and overfishing is not occurring (NEFSC 2020).

The Winter skate status criteria are based on the NEFSC fall survey.

The 3-year moving average of the Winter skate biomass index was below the threshold in 1995 and approached the threshold in 2006. However, the index has been fluctuating around the target for approximately the last 12 years. Under the current definition, a stock of skates is designated as overfished when the three-year moving average of the NEFSC survey index is less than $B_{THRESHOLD}$, the survey index estimates of the recommended biomass-based reference points (NEFSC 2019). Overfished status determinations are made by comparing the survey index estimates to the recommended biomass-based reference points (NEFMC 2017).

For Winter skate, the 2017-2019 NEFSC fall average biomass index of 8.61 kg/tow is above the biomass threshold reference point (2.83 kg/tow) and above the B_{MSY} proxy (5.66 kg/tow). The 2017-2019 average index is above the 2016-2018 index by 19.2% (NEFSC 2020).

Note that the B_{MSY} proxy for winter and little skate are close in scale, both being about 6 kg/tow. Also, both are fluctuating around the B_{MSY} proxy (Figure 2, Table 9). Therefore, while management procedures have been constructed for the entire skate complex, the Winter and Little skate are very dominant in the complex. Thus, the management procedures which address the skate complex as a whole are expected to be sufficiently responsive to the two main species ..

8.1.2 History of Fishing and Management

Skate landings have two components, one focused on larger skates to cut wings, and the other focused on small skates for bait in other fisheries. Based upon NMFS port sampling data, over 98 percent of skate wing fishery landings are composed of Winter Skate. Also, approximately 90 percent of skate bait landings are composed of Little Skate, with the remainder being largely comprised of juvenile Winter Skates. (NEFMC 2017, NEFSC 2019)

It has been historically difficult to determine skate species-specific landings and discards due to species identification issues and the nature of the landed product. For those reasons, the species-specific assessments are based on the survey data and the management is based on the aggregate skate complex. Nevertheless, there are estimates of skate landings and discards by species based on apportionment using scientific observation data from several sources, with Little and winter skate being the largest share (NEFSC 2019). Additionally, discards have been estimated. Figure 3 shows a peak in total catches around 1990. Figure 4 shows a declining trend over the last decade reflecting lower catches mainly of winter skate. Discards have fluctuated over the last 20 years. Both landings and discards of Winter and Little skate have fluctuated over the last two decades with no clear trends. Also, the proportion of the total that is comprised by Little skate landings and discards during that period has increased over the past decade while the catch of Winter skate has dropped.

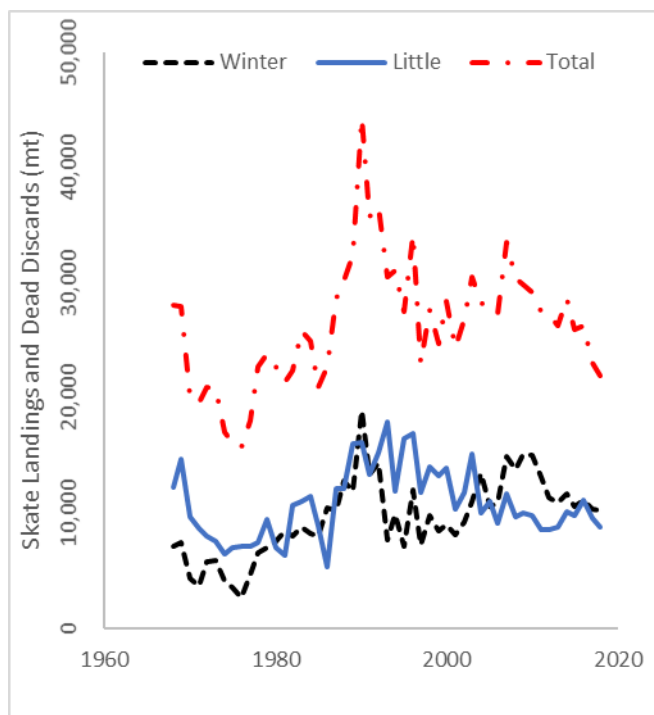


Figure 3 Winter, Little Skate and All Skates combined landings and discards 1968-2018 (NEFSC 2019).

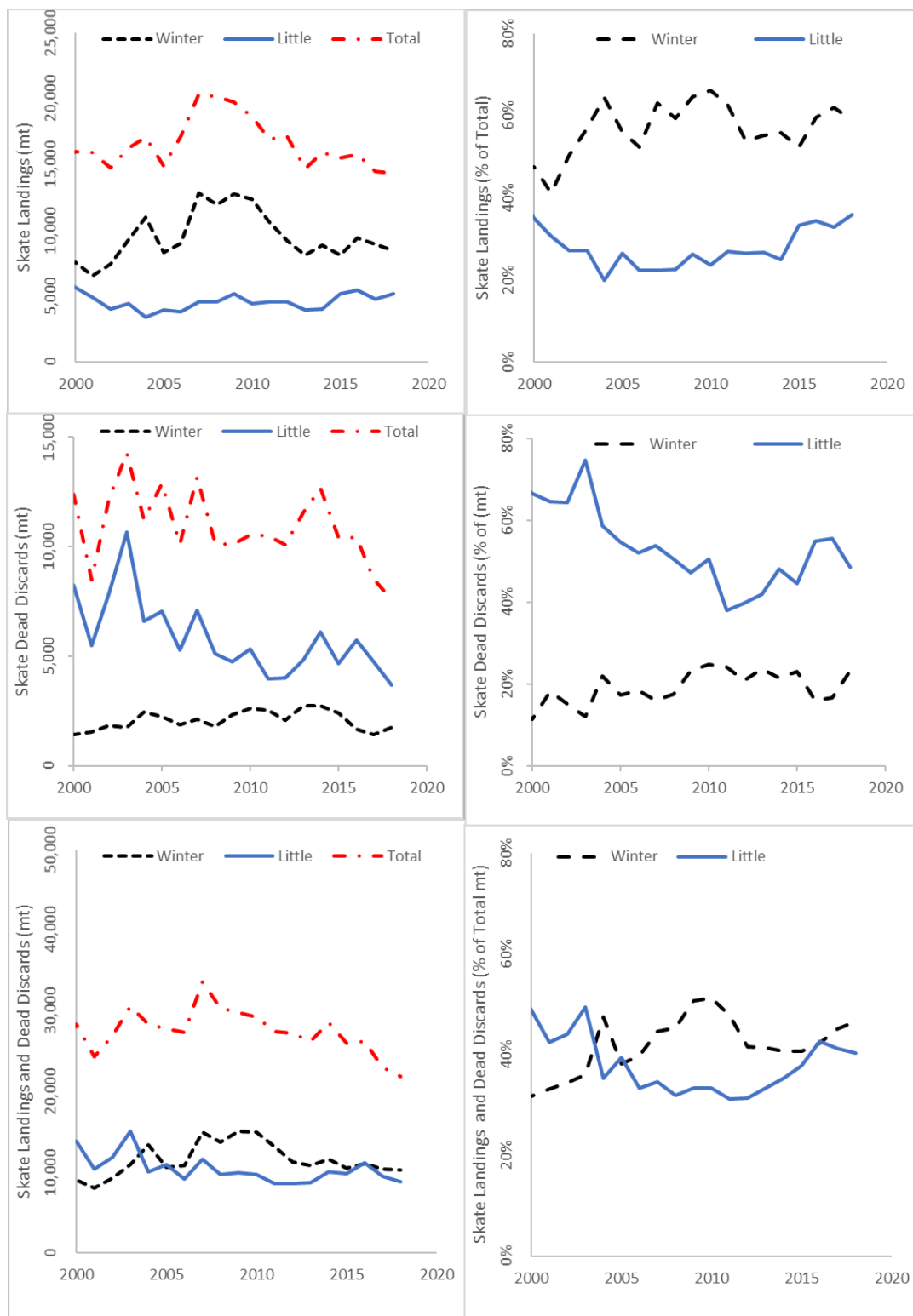


Figure 4 Winter, Little Skate and All Skates landings and discards 2000-2018 and percentages of each (NEFSC 2019).

Note that discards are a significant proportion of the total catch of the skate complex. Discards for the complex are estimated through from the Northeast Fisheries Science Center's Observer Database System, the Vessel Trip Report including logbooks, the NEFSC Commercial Fisheries Database System the Greater Atlantic Regional Fisheries Office allocation management system and the National Oceanic and Atmospheric Administration Marine Recreational Information Program database. The NEFSC's Fisheries Sampling Branch managed 3 comprehensive observer programs: the Northeast Fisheries Observer Program, the Industry Funded Scallop Program, and the At-Sea Monitoring Program that collect a broad range of data including information on all species, by disposition (retained and discarded), that are

encountered during a fishing trip as well as gear characteristics data and economic information. Biological samples are collected in the NEFOP and IFS programs but not the ASM program. The Fisheries Sampling Branch contracts trained sea-going observers and monitors to collect these data. Discard rates from observers and self-reported logbook information are expanded by stratified sea days from Vessel Trip Reports and other sources (Wigley and Tholke 2020). Skates were found to be the predominate species discarded of the 14 species estimated, primarily due to market limitations.

Winter and Little skates are managed as part of a skate complex with six other species under the New England Fishery Management Council's Skate Fishery Management Plan. The proposed overfishing definitions included in the northeast skate FMP proposes establish fishing mortality thresholds for all seven skate species based on a percentage decline in the NEFSC trawl survey. The status of skate overfishing is determined based on a rate of change in the three- year moving average from NEFSC Groundfish Survey biomass (NEFSC 2019).

The ABC and specifications for the skate complex for all species except Little skate are derived from the three-year running average of the fall survey. For Little skate the spring survey is used for the running average. The median ratio of the catches relative to the survey was used to determine the ABC. For skates, the Council set the ACL to be equal to the ABC. TALs are set according to procedures that assume that future discards would be equivalent to the average rate from the most recent three years and average state landings of the most recent three years. Currently; state landings would approximate to 3.45% of the total landings (NEFSC 2019).

The ACL is adjusted by a 10% buffer to get ACT (prior to Feb 2019 this was 25%). Then the Total Allowable Landings is set at the ACT reduced by the discards and State landings. Finally, the TAL is apportioned to a Wing TAL and a Bait TAL with a 66.6/33.5 split. (NMFS 2019). The most recent management specification for 2020-21 for the complex is in Figure 5.

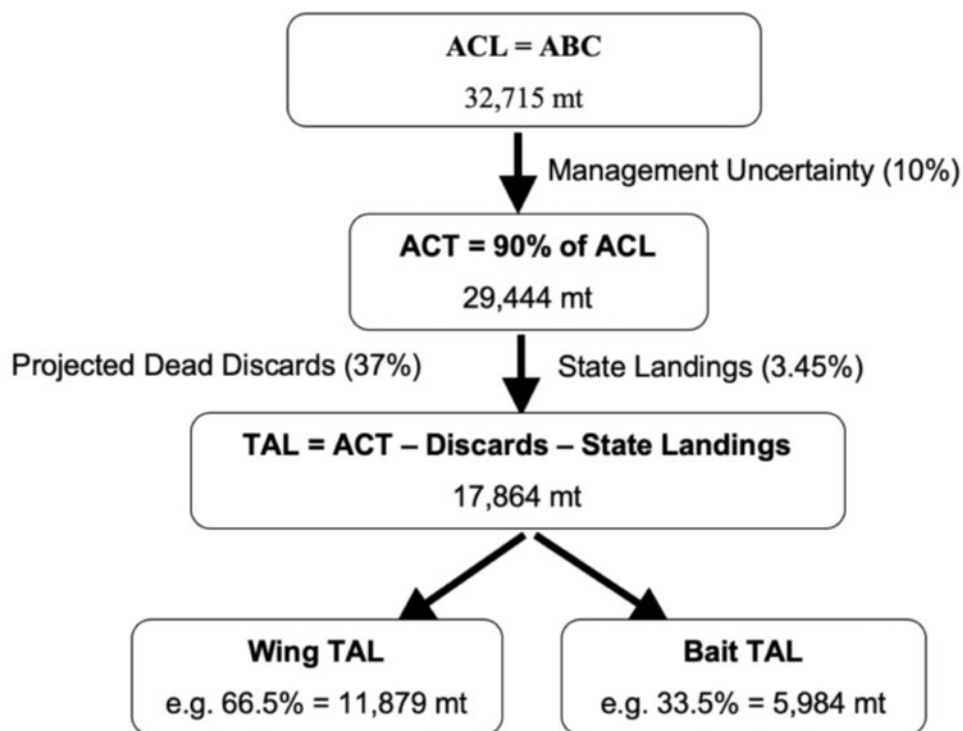


Figure 5 Determination of ABC, ACT and TAL for the Skate Complex for 2020-2021 NEFSC (2019).

As shown above with the catch histories and survey indices, the skate “complex” is effectively a two species complex consisting of Winter and Little skate. Despite the winter/little aggregation, there are a number of safeguards and indirect measures that support the current management of Winter and Little skate individually. Winter and Little skate status is monitored through their respective survey index and a Bmsy proxy has been established based upon the historical surveys. The indices have shown several

decades of relatively stable fluctuation between the biomass threshold and target, with recent years fluctuating around the target (Figure 2). Additionally, the proportion of the skate complex catch comprised of the two dominant species (Little and Winter) has been relatively stable for about 20 years. Thus, Winter and Little skates are determined to not be overfished and not undergoing overfishing (NEFSC 2019). Also, the status criteria as they are defined provides a trigger to adjust catches when faced with declining indices and/or indices below a threshold. This factor has been accounted for in the management plan by establishment of the system of buffers between ABC, ACL, and TAL. Additionally, the harvest strategy and control rule for the complex is coupled with the management standard of stopping overfishing on an individual stock whenever it occurs. Thus, if winter or little skate were determined to be undergoing overfishing after the annual review of the status, then a plan for stopping that overfishing must be developed immediately for that stock. The FMP has the mechanism to do that through the established use of buffers. Thus, while the management procedure is geared toward the skate complex as a whole, the harvest strategy and control rule are required through the FMP to be responsive to the deleterious status of an individual stock should it occur. Currently, all the skates in the complex have been determined to not be overfished and not undergoing overfishing with the exception of thorny skate. That stock has been determined to be overfished and is in recovery at a fishing rate that is less than that which would indicate overfishing. Thorny skate has been in a rebuilding plan since the original skate FMP was established in 2003. The 2017-2019 thorny skate index is above the 2016-2018 index by 11.4%, but biomass is only at 4.3% of the BMSY target after 17 years into the rebuilding period and eight years from the rebuilding deadline in 2028. Thorny landings are <1% of the total by weight and thorny dead discards are <2% of the total by weight). Additionally, barndoor skate was determined to be severely overfished some decades ago (Figure 2), but with the implementation of the FMP procedures it has recovered such that it is currently at its target. These results suggest some efficacy of the management procedures in stopping overfishing and the recovery of overfished skate stocks (albeit slowly). Nevertheless, the life history nature of both Winter and Little skate (relatively old age at maturity) suggests a need for added precaution in management, including regular review of the basic assessment approaches.

8.1.3 Lower Trophic Level Species

Little Skate and Winter skate are not Lower Trophic Level species

8.1.4 Catch profiles

Please see Figure 3 and Figure 4 above.

8.1.5 Total Allowable Catch (TAC) and catch data

The recent aggregate landings TAC's are given in Table 10. For reasons discussed above, species-specific landing statistics are not available. However, scientific methods to apportion the landings have been used (Figure 3). The most recent estimated 2018 landings were 8461 mt and 5152 mt for winter and little skates, respectively.

Table 10 Total Allowable Catch (TAC) and catch data

TAC = Skate Complex Annual Catch Target	Year	2020	Amount	17,864 mt
UoA share of TAC	Year	2019	Amount	13,157mt
UoA share of total TAC	Year	2018	Amount	13,157mt
Total green weight catch by UoC	Year (most recent)	2019	Amount	1,199mt

Total green weight catch by UoC	Year (second most recent)	2018	Amount	1,146mt
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8.2 Principle 1 Performance Indicator scores and rationales

PI 1.1.1 – Stock status

PI 1.1.1		The stock is at a level which maintains high productivity and has a low probability of recruitment overfishing		
Scoring Issue		SG 60	SG 80	SG 100
a	Stock status relative to recruitment impairment			
	Guide post	It is likely that the stock is above the point where recruitment would be impaired (PRI).	It is highly likely that the stock is above the PRI.	There is a high degree of certainty that the stock is above the PRI.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes
Rationale				

Winter Skate

The NEFSC Fall survey biomass index for Winter skate is the basis of determining status. A threshold (overfished definition) is defined as when the 3-year moving average of the spring survey mean weight per tow is less than one-half of the 75th percentile of the mean weight per tow observed in the spring trawl survey from the selected reference time series. That threshold is 50% of the Bmsy proxy and 21% of the largest observed value of the 3-year average survey consistent with MSC guidelines. The threshold has only been exceeded three times in the last 40-year time series (Figure 2). The last time the threshold was approached was about 20 years ago and in the last decade the biomass has been well above the threshold, fluctuating around the target. Given these biomass trends and recent levels, there is a high degree of certainty that the stock is above the point where recruitment would be impaired. SG 60, 80 and SG 100 are met.

Little skate

The NEFSC Spring biomass index for Little skate is the basis of determining status. A threshold (overfished definition) is defined as when the 3-year moving average of the spring survey mean weight per tow is less than one-half of the 75th percentile of the mean weight per tow observed in the spring trawl survey from the selected reference time series. That threshold is 50% of the Bmsy proxy and 38% of the largest observed value of the 3-year average survey, consistent with MSC guidelines. The threshold has only been exceeded three times in the last 40-year time series (Figure 2). The last time the threshold has not been approached in the 35 years of the time series, and has been well above the threshold, fluctuating around the target. Given these biomass trends and recent levels, there is a high degree of certainty that the stock is above the point where recruitment would be impaired. SG 60, 80 and SG 100 are met.

Stock status in relation to achievement of Maximum Sustainable Yield (MSY)				
b				
	Guide post	The stock is at or fluctuating around a level consistent with MSY.		There is a high degree of certainty that the stock has been fluctuating around a level consistent with MSY or

				has been above this level over recent years.
	Met?		Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes
Rationale				

Winter skate

The NEFSC Fall survey biomass index for Winter skate is the basis of determining status. A target (Bmsy proxy) is defined by the 3-year moving average of the spring survey mean weight per tow relative to the average during the selected reference time series. That Bmsy proxy is 41% of the highest observed data point of the 3-year average. The index has been approximately at or above the Bmsy proxy for the last 10 years and increasing over the last 5 years (Figure 2). Therefore, the biomass is fluctuating around a level consistent with MSY (the target) and there is a high degree of certainty that the stock has been fluctuating around a level consistent with MSY, therefore SG 80, 100 are met.

Little skate

The NEFSC Spring survey biomass index for Little skate is the basis of determining status. A target (Bmsy proxy) is defined by the 3-year moving average of the spring survey mean weight per tow relative to the average during the selected reference time series. That Bmsy proxy is 77% of the highest observed data point of the 3-year average. Since 1980 the index has been above the Bmsy proxy 8 years out of 18 and it has been above the target 5 of the most recent 8 years (Figure 2), albeit the three most recent years are below the target including the current (2019) level. However, the current index shows an increase of 13.4% relative to the previous year. Therefore, the biomass is fluctuating around a level consistent with MSY (the target) and there is a high degree of certainty that the stock has been fluctuating around a level consistent with MSY, therefore SG 80, 100 are met.

Note that the Bmsy proxy has been specified at a fixed level and then status is determined relative to that level. This was done in this case for a non-analytical assessment based on indices. This is the equivalent of specifying a Bmsy proxy based upon spawning potential ratios from an analytical assessment. In both cases, the Bmsy criteria is being assigned based upon external information independent of the “model”, and in both cases there is uncertainty in the proxy level that is chosen. The skate assessment approach employs sound reasoning to support for the proxies. Nevertheless, there is a need to revisit this issue which we have addressed in 1.2.4.

References

NEFSC. 2020. 2019 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 7/10/2020)
https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_July_2020.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications
<https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf>

Stock status relative to reference points			
	Type of reference point	Value of reference point	Current stock status relative to reference point
Reference point used in scoring stock	Little skate: Biomass Survey Index (BSI) Threshold.	Little skate: 3.07 kg/tow	Little skate: BSI (2017-2019)/BSI Threshold =1.73

relative to PRI (Sla)			
Reference point used in scoring stock relative to MSY (Sib)	<i>Biomass Survey Index (BSI) Target.</i>	6.15 kg/tow	<i>BSI (2017-2019)/BSI Target =0.87; BSI (2017-2019)/BSI(2016-2018)/Target =1.13</i>
	Type of reference point	Value of reference point	Current stock status relative to reference point
Reference point used in scoring stock relative to PRI (Sla)	Winter skate: Biomass Survey Index (BSI) Threshold.	Winter skate: 2.83 kg/tow	Winter skate: BSI (2017-2019)/BSI Threshold =2.55
Reference point used in scoring stock relative to MSY (Sib)	<i>Biomass Survey Index (BSI) Target.</i>	5.66 kg/tow	<i>BSI (2017-2019)/BSI Target =0.1.27; BSI (2017-2019)/BSI (2016-2018)/Target =1</i>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	All UoAs: ≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	100
Condition number (if relevant)	N/A

PI 1.1.2 – Stock rebuilding

PI 1.1.2		Where the stock is reduced, there is evidence of stock rebuilding within a specified timeframe		
Scoring Issue		SG 60	SG 80	SG 100
a	Rebuilding timeframes			
	Guide post	A rebuilding timeframe is specified for the stock that is the shorter of 20 years or 2 times its generation time . For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years.		The shortest practicable rebuilding timeframe is specified which does not exceed one generation time for the stock.
	Met?	Winter skate: N/A Little skate: N/A		Winter skate: N/A Little skate: N/A
Rationale				

Not Applicable. Stock is not overfished

b	Rebuilding evaluation			
	Guide post	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe.	There is evidence that the rebuilding strategies are rebuilding stocks, or it is likely based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe .	There is strong evidence that the rebuilding strategies are rebuilding stocks, or it is highly likely based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe .
	Met?	Winter skate: N/A Little skate: N/A	Winter skate: N/A Little skate: N/A	Winter skate: N/A Little skate: N/A
Rationale				

Not Applicable. Stock is not overfished

References

List any references here, including hyperlinks to publicly-available documents.

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range N/A

Information gap indicator	N/A
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Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	N/A
Condition number (if relevant)	N/A

PI 1.2.1 – Harvest strategy

PI 1.2.1		There is a robust and precautionary harvest strategy in place		
Scoring Issue		SG 60	SG 80	SG 100
a	Harvest strategy design			
	Guide post	The harvest strategy is expected to achieve stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives reflected in PI 1.1.1 SG80.	The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in PI 1.1.1 SG80.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No
Rationale				

The Winter Skate and Little skate harvest strategy is defined through the Skate FMP with the major objectives of maintaining stocks at levels that can support MSY, maintaining fishing rates at levels less than Fmsy and to stop overfishing “immediately” should it occur. The harvest strategy is achieved through management allocation of catches of the combined Skate Complex at levels that can maintain Bmsy with appropriate buffers. Additionally, the strategy takes into account the interaction of the fishery with other target species (dogfish, Winter skate and other skates). Annual Catch Limits, Annual Catch Targets and overfishing limits are determined based on the target and limit reference points (see section 8.1.1). For the Skate Complex, the scientifically derived ABC set by management as the Annual Catch Limit. Then the ACL is reduced by a 10% buffer to get the Annual Catch Target. Finally, the ACT is adjusted downward by discard rates and state catches to get the Total Allowable Landings. As the stocks change, the rule stipulates the catch advice is adjusted up or down using the trend of the smoothed three-year running average of the biomass indices (section 8.1.1). Therefore, the harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points. However, the management regime is implemented for the complex, rather than individual stocks. While the monitoring and assessment using an index is appropriate, the harvest strategy is designed to increase or decrease the catch of the whole complex, rather than individual stocks. Therefore, the question remains whether the harvest strategy is responsive to the two individual stocks of Winter and Little skate.

The evidence discussed in 8.1 suggests that effectively, the management system primarily addresses the Winter and Little skate stocks with some allowance for the other species, so the “complex” essentially consists of two species. Relative catches of the two species have not exhibited large deviations over the last 20 years, the scale of the survey biomass of the two species is similar (the Bmsy proxy of both is approximately 6 kg/tow).

The status criteria as they are defined provides a trigger to adjust catches when faced with declining indices and/or indices below a threshold. This factor has been accounted for in the management plan by establishment of the system of buffers between ABC, ACL, and TAL. Additionally, the harvest strategy and control rule for the complex is coupled with the management standard of stopping overfishing on an individual stock whenever it occurs. Thus, if winter or little skate were determined to be undergoing overfishing after the annual review of the status, then a plan for stopping that overfishing must be developed immediately for that stock. The FMP has the mechanism to do that through the established use of buffers. Thus, while the management procedure is geared toward the skate complex as a whole, the

harvest strategy and control rule is required through the FMP to be responsive to the deleterious status of an individual stocks of winter and little skate should it occur. Currently, all of the skates in the complex have been determined to not be overfished and not undergoing overfishing with the exception of thorny skate. That stock has been determined to be overfished and is in recovery at a fishing rate that is less than that which would indicate overfishing. Thorny landings are <1% of the total by weight and thorny dead discards are <2% of the total by weight. Thorny skate has been in a rebuilding plan since the original skate FMP was established in 2003. The 2017-2019 thorny skate index is above the 2016-2018 index by 11.4%, but biomass is only at 4.3% of the BMSY target after 17 years into the rebuilding period and eight years from the rebuilding deadline in 2028. Additionally, barndoor skate was determined to be severely overfished some decades ago (Fig 2), but with the implementation of the FMP procedures it has recovered such that it is currently at its target. These results suggest some efficacy of the management procedures in stopping overfishing and the recovery of overfished skate stocks (albeit slowly). But more importantly for little and winter skate, the classification of one of them as undergoing overfishing would immediately trigger a response through the FMP framework to reduce the ABC, ACL and TAL to address overfishing. This could possibly result in reduced catches in the unimpacted stock which would be a precautionary response.

This harvest strategy and its elements as expressed in the FMP have worked together to obtain the objectives of management. It is expected that the strategy is responsive to the state of the stock of Little and Winter skate, but it is designed primarily to achieve management objectives for the skate complex as a whole, not Little or Winter skate individually. The history of its use suggests that it is working, but the combined species issue leads to the conclusion that SG 100 is not met.

Harvest strategy evaluation				
b	Guide post	The harvest strategy is likely to work based on prior experience or plausible argument.	The harvest strategy may not have been fully tested but evidence exists that it is achieving its objectives.	The performance of the harvest strategy has been fully evaluated and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No
Rationale				

For both Winter and Little skate, the harvest strategy has not have been fully tested but evidence exists that it is achieving its objectives. The harvest strategy as implemented through the FMP has been demonstrated to “work” in that the catch levels and indices appear to be keeping biomass above threshold and target levels (Section 8.1.1). This is demonstrated by the relative stability of the catch over the last two decades and that the biomass index has been fluctuating around the target, therefore the SG60 and SG80 levels are met.

However, there has been no full evaluation of the strategy through simulation and/or stock assessments and Management Strategy Evaluation, thus the SG 100 is not met for any of the UoAs.

Harvest strategy monitoring				
c	Guide post	Monitoring is in place that is expected to determine whether the harvest strategy is working.		

	Met?	Winter skate: Yes Little skate: Yes		
Rationale				

Catches, indices, surveys and discards are monitored annually (section 8.1.1). These are reported and incorporated into the FMP TAL setting process (section 8.1.1.). Realized catches and indices are compared to the ACLs and TALs to determine whether the harvest strategy is working. SG 60 is met for all UoAs.

Harvest strategy review				
d	Guide post			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Winter skate: Yes Little skate: Yes
Rationale				

The harvest strategy is reviewed annually to determine if objectives are being achieved. Through the New England Fishery Management Council, the FMP is reviewed at least annually to determine if improvements are needed. Framework Actions through the Council allow annual adjustments to TALs. Improvements can and have been implemented through the FMP amendment process (section 8.1.1) SG 100 is met for all UoAs.

Shark finning				
e	Guide post	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	N/A	N/A	N/A
Rationale				

There is no non-dogfish shark catch in the fishery and no finning of dogfish occurs. (Not applicable).

Review of alternative measures				
f	Guide post	There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock.	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate.	There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No
Rationale				

There are discards of Winter and Little skate within the UoA and in the fishery as a whole. These discards are documented annually. The harvest strategy has been designed to account for these discards by deducting them from the overall catch such that the TAC is reduced according to the amount of discarding.

The FMP has, as one of its standards or goals, a requirement to reduce bycatch to the extent practicable. The most practicable approach has been revisited periodically through review of the FMP and as revisions of the FMP have occurred. It has been determined through those reviews that the most practical approach at this time is to account for the discards in the determination of the TAC and that has been implemented as appropriate. Thus, the potential effectiveness has been addressed; SG60 and SG80 are met.

However, there have not been biennial reviews to specifically address potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, so the SG 100 level is not met for any of the UoAs.

References

NEFSC. 2020. 2019 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 8/14/2019)
https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_July_2019.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications
<https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	All UoAs: ≥ 80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	N/A

PI 1.2.2 – Harvest control rules and tools

PI 1.2.2		There are well defined and effective harvest control rules (HCRs) in place		
Scoring Issue		SG 60	SG 80	SG 100
a	HCRs design and application			
	Guide post	Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached.	Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs.	The HCRs are expected to keep the stock fluctuating at or above a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, most of the time.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes
Rationale				

There is a well-defined Harvest Control Rule (HCR) for winter and little skate. The ABC, ACL and ACT are defined through a procedure formalized in the FMP in which catches are derived from the median catch/biomass exploitation ratio for time series and the three-year average stratified mean biomass for skates, using the fall survey data for winter skate and other skate species (Section 8.1.1). As the biomass index declines and approaches or exceeds the threshold, the catch levels are reduced, and catches are reduced more sharply if thresholds are exceeded and the limit (PRI) is approached. The well-defined HCR is expected to keep the stock fluctuating around a target level consistent with MSY SG 60 and SG80 are met.

While the HCR is formulated for the skate complex rather than for individual skate stocks, it is designed to be responsive to the target biomass index (Section 8.1.1 and 8.1.2) the stock has been fluctuating around the target level (Figure 2). The target level is appropriate for skate biology and ecology and incorporates the potential effect of discarding behavior on the efficacy of the HCR (see justification below for 1.2.2.b). The SG100 is met for all UoAs.

HCRs robustness to uncertainty				
b	Guide post		The HCRs are likely to be robust to the main uncertainties.	The HCRs take account of a wide range of uncertainties including the ecological role of the stock, and there is evidence that the HCRs are robust to the main uncertainties.
	Met?		Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No

Rationale

The main ways in which uncertainty is addressed in the Winter and Little skate HCR are through the definition of the threshold based on the 75th percentile of the index and a 10% buffer for the skate complex definition of ACL relative to ABC. While these act in concert to make the HCR robust to the main uncertainties they do not account for a wider set of uncertainties that likely affect the efficacy of the skate HCR, including uncertainty in basic productivity estimates and uncertainties in removals that arise due to discarding being a substantial portion of the total (Figure 4).

Estimated discard ratios were derived from the Sea Sampling Observer and the At Sea Monitoring programs and included both sector and non-sector vessels but were not stratified on that basis. The projected discard rate is calculated using a three-year average of the discards of skates/landings of all species. If changes in discarding behavior were to occur, this could increase uncertainty in the implementation of the harvest control rule. This is considered in part through the monitoring of discards and their annual review. Should variations in discards occur, the ABC/ACL will be adjusted accordingly (Figure 5). Nevertheless, this is a potential weakness in the HCR. While the HCR is likely to be robust to the main uncertainties (SG80 is met), there is not sufficient evidence that it takes account of a wide range of uncertainties (SG100 is not met).

The selection of the harvest control rules considers the main uncertainties, meeting the SG80 level, however the SG100 level is not met for all the UoAs.

HCRs evaluation				
c	Guide post	There is some evidence that tools used or available to implement HCRs are appropriate and effective in controlling exploitation.	Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the HCRs.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No
Rationale				

Evidence indicates that the HCR is achieving its objectives in that the biomass thresholds have not been exceeded, the biomass index is fluctuating around the target (Figure 2, Section 8.1.2 and 8.1.2) and catch levels are well within the limits established in the HCR. The tools being used to implement the HCR are therefore appropriate and effective in achieving the exploitation levels required under the harvest control rules. SG60 and SG80 are met.

The exploitation rate is measured by the biomass index for the skate complex, with short-term increases or declines being attributed to fishing. However, part of the change in the biomass index may be the result of changes in the availability of little skate to the survey. Because of the weaker linkage between the HCR for the skate complex and the outcomes specifically for the little skate stock, it cannot be said that the evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the HCRs. SG 100 not met for any of the UoAs.

References

NEFSC. 2020. 2019 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 7/10/2020)
https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_July_2020.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications
<https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	All UoAs: ≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	N/A

PI 1.2.3 – Information and monitoring

PI 1.2.3		Relevant information is collected to support the harvest strategy		
Scoring Issue		SG 60	SG 80	SG 100
a	Range of information			
	Guide post	Some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy.	Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data are available to support the harvest strategy.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, UoA removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No
Rationale				

The harvest strategy for both Little and Winter skate is designed to maintain stocks at levels that would support maximum sustainable yield and to stop overfishing should it occur. This requires the assessment of the two stocks and the control of fishing mortality rates on those stocks. Sufficient research supports stock determination (noted in Figure 1 and in Section 8.1). Additionally, the productivity of each stock is monitored through resource surveys (Figure 2 and Section 8.1) which determine changes in relative biomass (productivity) and the status of that biomass relative to potential productivity (Section 8.1). UoA fleets as well as other fleets impacting these skates require permits and are monitored for their activities. These data and information-collecting procedures are sufficient to support the harvest strategy that has been implemented. And results of that implementation indicate that the harvest strategy has been effective. Therefore, SG60 and SG80 are met.

The survey has evolved over time requiring re-calibrations shifts in sampling strata. These have been analyzed and implemented into the survey framework. However, the possibility of recent climatic shifts exists. The question of the relationship of survey variability and its relationship to productivity have not been revisited in some time. The information to support these investigations appear to be lacking. Information is also lacking for relating the aggregate catches of Little and Winter skate used in the harvest strategy management procedure with the dynamics of each of the two individual stocks. (Note both of these issues are addressed in the scoring of 1.2.4). These deficiencies indicate that SG 100 is not met for Little and Winter skates.

Monitoring				
G).	Guide post	Stock abundance and UoA removals are monitored and at least one indicator is available and monitored	Stock abundance and UoA removals are regularly monitored at a level of accuracy and coverage consistent	All information required by the harvest control rule is monitored with high frequency and a high degree of certainty,

		with sufficient frequency to support the harvest control rule.	with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule.	and there is a good understanding of inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No
Rationale				

Abundance surveys are conducted twice annually, all landings are monitored, and discards are estimated. These surveys have been integrated into assessment advice and catch decision rules. Therefore, stock abundance and fishery removals are regularly monitored at a level of accuracy and coverage consistent with the harvest control rule, and one or more indicators are available and monitored with sufficient frequency to support the harvest control rule. SG60 and SG80 are met. Not all information required by the harvest control rule is monitored with high frequency and a high degree of certainty. The discards are estimated using at-sea observers, but the estimates are not well stratified. Additionally, the discard estimates used in the HCR are a 3-year average. Also, as with all surveys, the consistency of the “catchability” is always questioned (see rationale to 1.2.3a and Section 8.1). In the case of little skate there have been changes in survey equipment during the period which have been addressed through calibration, but these changes might still affect the estimate of the target level for the index. (Note these issues are addressed in the scoring of 1.2.4). For these reasons, the SG100 is not met for any of the UoAs.

Comprehensiveness of information				
C	Guide post		There is good information on all other fishery removals from the stock.	
	Met?		Winter skate: Yes Little skate: Yes	
Rationale				

Removals are all monitored, including landings, discards, state catches. The removals of Little and Winer skate due to discarding are a substantial portion of the total (Figure 4). The observed discard ratios were derived from the Sea Sampling Observer and the At Sea Monitoring programs and included both sector and non-sector vessels but were not stratified on that basis. The projected discard rate is calculated using a three-year average of the discards of skates/landings of all species. If changes in discarding behavior were to occur, this could reduce the efficacy of the harvest control rule. Nevertheless, the Assessment Team concluded that there is good information on all fishery removals from the stock (Section 8.1.2) and SG 80 is met.

References

NEFSC. 2020. 2019 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 7/10/2020)
https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_July_2020.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications
<https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	80
Condition number (if relevant)	N/A

PI 1.2.4 – Assessment of stock status

PI 1.2.4		There is an adequate assessment of the stock status		
Scoring Issue		SG 60	SG 80	SG 100
a	Appropriateness of assessment to stock under consideration			
	Guide post		The assessment is appropriate for the stock and for the harvest control rule.	The assessment takes into account the major features relevant to the biology of the species and the nature of the UoA.
	Met?		Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No
Rationale				

The assessments of Winter and Little skate are index based. The abundance index is appropriate for the current stock and the HCR. SG80 is met. However, there are a large number of features relevant to the biology of this species and the fishery, including growth rates, mortality and spawning productivity that are not being addressed directly. Additionally, there is an inherent uncertainty in the linkage between the stock-specific biomass index and the HCR for the skate complex. Thus, SG100 is not met for any of the UoAs.

b	Assessment approach			
	Guide post	The assessment estimates stock status relative to generic reference points appropriate to the species category.	The assessment estimates stock status relative to reference points that are appropriate to the stock and can be estimated.	
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes	
Rationale				

The Winter and Little skate assessments estimate stock status relative to reference points (Section 8.1.2) through a survey biomass index. Surveys are repeated and the index is estimated annually. Overfishing and overfished definitions are based on the historical time series of the biomass survey index. Thus, the status determination is appropriate for the stocks as demonstrated by the history of the biomass and catches. SG 60 and SG 80 are met for all UoAs.

c	Uncertainty in the assessment			
	Guide post	The assessment identifies major sources of uncertainty.	The assessment takes uncertainty into account .	The assessment takes into account uncertainty and is evaluating stock status relative to reference points in a probabilistic way.
	Met?	Winter skate: Yes Little skate: Yes	Winter skate: No Little skate: No	Winter skate: No Little skate: No

Rationale

Major sources of uncertainty have been identified (Section 8.1.2), thus SG 60 is met. However, the assessment does not consider many of the uncertainties. The pragmatic specifications of overfishing and overfished levels were chosen appropriately, however, they have not been clearly linked to actual stock productivity. The uncertainties in biological productivity, distribution, reproduction and mortality have not been explored since the Data Poor Workshop (2008).

Discard rates and their monitoring are an important component of the HCR. Additionally, there was a change in survey vessel during the period when the target index was established. Calibration was undertaken, but uncertainties remain. Alternative assessment analysis methods might be explored to better take this uncertainty into account, which can then be related to the index monitoring methods. The index itself has been reviewed and modified, but the uncertainties in the relationship between productivity and the assessment have not. Currently SG 80 is not met for any of the UoAs.

Evaluation of assessment				
d	Guide post			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			Winter skate: No Little skate: No
Rationale				

The Little and Winter skate assessments have not been tested to show if they are robust (Section 8.1.2). Alternative hypotheses and assessment approaches were suggested in 2008, but not since then and not rigorously. SG 100 is not met for any of the UoAs.

Peer review of assessment				
e	Guide post		The assessment of stock status is subject to peer review.	The assessment has been internally and externally peer reviewed.
	Met?		Winter skate: Yes Little skate: Yes	Winter skate: Yes Little skate: Yes
Rationale				

The original assessment approach was reviewed by internal and external peers in the Data Poor Workshop (2008). Since then, assessments are conducted through the NEFSC and associated partners. Assessments are updated annually and reviewed internally within the NEFSC system. Annual assessment results and status determinations are reviewed externally by the Scientific and Statistical Committee of the New England Fishery Management Council. Additionally, several individual assessment issues have been addressed through formal external review (e.g., Center of Independent Experts review of discard estimation methods, survey calibration). SG809 and SG100 are met for all UoAs

References

NEFSC. 2020. 2019 NE Skate Stock Status Update (NEFSC, Lead Analyst: K. Sosebee, 7/10/2020)
https://s3.amazonaws.com/nefmc.org/4_SkateAssessmentUpdate_July_2020.pdf

NEFMC. 2019. Skates: Council Approves 2020-2021 Fishery Specifications
<https://s3.amazonaws.com/nefmc.org/NEFMC-Approves-2020-2021-Skate-Specifications.pdf>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	60-79
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	75
Condition number (if relevant)	1

9 Principle 2

9.1 Principle 2 background

Species categorization in P2:

Primary species in Principle 2 are those that meet the following criteria:

- Species in the catch that are not covered under P1 because they are not included in the UoA;
- Species that are within scope of the MSC program as defined in FCR 7.4.1.1; and
- Species where management tools and measures are in place, intended to achieve stock management objectives reflected in either limit or target reference points.

Secondary species are classified as follows:

- They are not considered 'primary' as defined in SA 3.1.3; or
- They are out of scope for MSC certification (i.e., birds, reptiles or mammals) but are not ETP species.

The team determined that catches averaging below approximately 0.1% of total catch would have little impact on the status of incidental species, considered smaller catches as *de minimis*, and did not further consider them.

We designate "main" primary and secondary species as those which comprise at least 5% of the total catch, or at least 2% of the total catch for "more vulnerable/less resilient" species, whose life history characteristics may make them more prone to overexploitation. All "out of scope" secondary species must be classified as "main."

The definition of ETP species includes those protected by national or international legislation, and names a number of international lists/agreements where, if a species is listed, it must be considered as ETP regardless of other national protection. The list of agreements is as follows:

- Annex 1 of the Convention on International Trade in Endangered Species (CITES) unless it can be shown that the particular stock of the CITES listed species impacted by the UoA is not endangered;
- Annex 1 of the Agreement on Conservation of Albatross and Petrels (ACAP);
- Table 1 Column A of the African-Eurasian Migratory Waterbird Agreement (AEWA);
- Agreement on the Conservation of Small Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area (ACCOBAMS);
- Wadden Sea Seals Agreement; and
- Any other binding agreements that list relevant ETP species concluded under the Convention on Migratory Species (CMS).
- Any out of scope species (birds, mammals or reptiles) not otherwise protected under the above or national legislation, but with a status of Critically Endangered, Endangered, or Threatened on the IUCN red list.

Habitats categorization in P2:

MSC requires that if a fishery interacts with benthic habitats, they shall be categorized according to the characteristics "substratum, geomorphology, and biota," and requires that encountered habitats are classified as "commonly encountered, VME, or minor/other" according to the following definitions:

- "A commonly encountered habitat shall be defined as a habitat that regularly comes into contact with a gear used by the UoA, considering the spatial (geographical) overlap of fishing effort with the habitat's range within the management area(s) covered by the governance body(s) relevant to the UoA; and
- A VME shall be defined as is done in paragraph 42 subparagraphs (i)-(v) of the FAO Guidelines⁷ (definition provided in GSA3.13.3.22) [as having one or more of the following characteristics: uniqueness or rarity, functional significance, fragility, Life-history traits of component species that

make recovery difficult, and/or structural complexity]. This definition shall be applied both inside and outside EEZs and irrespective of depth.”

Both commonly encountered and VME habitats are considered ‘main’ habitats for scoring purposes.

9.1.1 Overview of Non-target Catch

Designation of Species

The analysis for P2 is made considering that the UoAs and the UoCs are the same for the two UoA: US Northeast sink gillnet fleet and the US Northeast bottom trawl fleet.

Observer catch records were obtained from NOAA Fisheries for the period of 2015-2019, the most recent five completed fishing years for catches by gear type as well as protected resources (birds, mammals and reptiles) interactions by gear type. Observer records are not extrapolated—they are the actual quantities observed for each species—in the case of birds, reptiles and mammals, these are recorded in numbers of individuals, for all other species or groups weight in pounds is recorded. Because there is no extrapolation, this data is used to classify primary and secondary species into main and minor based on catch proportions (see Table 11 and Table 12). A total of 727 bottom trawl and 968 gillnet trips were observed where winter or little skate were included among the trip targets over this time period. In general, between 10 and 18% of northeast gillnet trips and between 12 and 19% of northeast bottom trawl trips are observed annually. Observer rates for the gillnet fisheries are calculated based on tons of fish landed and rates for the bottom trawl fishery are based on numbers of trips (NOAA 2019).

Gillnet

Table 11. Gillnet catch composition data 2015-2019 in pounds of observed catch. Target species are highlighted in green, including “Skates NK” as these are primarily winter or little skate, main primary species are highlighted in yellow, and all minor species or groups are in white. As minor species have not been assessed, they are also not classified as primary or secondary.

Species	Scientific name	2015	2016	2017	2018	2019	Grand total	% of total
SKATE, WINTER (BIG)	RAJA OCELLATA	1,548,908	609,651	957,300	359,043	761,195	4,236,097	57.14%
DOGFISH, SPINY	SQUALUS ACANTHIAS	459,804	300,485	342,542	63,489	209,713	1,376,033	18.56%
MONKFISH (GOOSEFISH)	LOPHIUS AMERICANUS	206,938	143,704	187,893	144,696	309,265	992,496	13.39%
SKATE, NK	RAJIDAE	94,857	26,887	105,127	17,450	93,233	337,554	4.55%
SKATE, BARNDOR	RAJA LAEVIS	32,705	22,170	43,280	19,169	22,822	140,146	1.89%
SKATE, LITTLE	RAJA ERIANCEA	34,876	18,403	42,449	8,641	20,840	125,208	1.69%
DOGFISH, SMOOTH	MUSTELUS CANIS	2,456	2,580	5,432	4,303	6,245	21,015	0.28%
POLLOCK	POLLACHIUS VIRENS	5,249	917	2,172	51	12,189	20,578	0.28%
FLOUNDER, SUMMER (FLUKE)	PARALICHTHYS DENTATUS	4,602	2,832	3,530	2,235	5,388	18,587	0.25%
LOBSTER, AMERICAN	HOMARUS AMERICANUS	7,493	3,151	2,233	1,834	2,399	17,109	0.23%
COD, ATLANTIC	GADUS MORHUA	4,634	1,401	4,858	853	5,031	16,776	0.23%
SKATE, LITTLE/WINTER, NK	LEUCORAJA	6,780	3,025	1,842	435	16	12,098	0.16%

BLUEFISH	<i>POMATOMUS SALTATRIX</i>	4,219	1,848	3,723	26	1,847	11,663	0.16%
STURGEON, ATLANTIC	<i>ACIPENSER OXYRHYNCHUS</i>	996	2,984	829	2,321	2,789	9,919	0.13%
CRAB, JONAH	<i>CANCER BOREALIS</i>	2,487	1,080	1,515	971	847	6,900	0.09%
HADDOCK	<i>MELANOGRAMMUS AEGLEFINUS</i>	629	185	221	719	4,297	6,051	0.08%
CRAB, HORSESHOE	<i>LIMULUS POLYPHEMUS</i>	1,821	934	634	1,330	1,191	5,910	0.08%
MUSSEL, NK	<i>MYTILUS MODIOLUS SP</i>	52	22	93	4,508	7	4,683	0.06%
FISH, NK	<i>OSTEICHTHYES</i>	1,093	582	1,806	703	255	4,439	0.06%
SHARK, PORBEAGLE (MACKEREL SHARK)	<i>LAMNA NASUS</i>	140		498	1,772	1,928	4,338	0.06%
SEAWEED, NK	<i>PHAEOPHYTA</i>	1,759	831	193	332	213	3,327	0.04%
SHARK, SANDBAR (BROWN SHARK)	<i>CARCHARHINUS PLUMBEUS</i>	1,140	240	545		1,027	2,952	0.04%
HAKE, WHITE	<i>UROPHYCIS TENUIS</i>	160	191	211	220	1,650	2,432	0.03%
SKATE, CLEARNOSE	<i>RAJA EGLANTERIA</i>	590	721	199	261	275	2,046	0.03%
HALIBUT, ATLANTIC	<i>HIPPOGLOSSUS HIPPOGLOSSUS</i>	520	48	235	293	889	1,984	0.03%
RAVEN, SEA	<i>HEMITRIPTERUS AMERICANUS</i>	854	204	268	171	369	1,865	0.03%
CRAB, ROCK	<i>CANCER IRRORATUS</i>	129	241	860	60	518	1,807	0.02%
FLOUNDER, YELLOWTAIL	<i>PLEURONECTES FERRUGINEUS</i>	429	14	5	1,328	11	1,786	0.02%

FLOUNDER, WINTER (BLACKBACK)	<i>PLEURONECTES AMERICANUS</i>	215	15	538	808	16	1,592	0.02%
MENHADEN, ATLANTIC	<i>BREVOORTIA TYRANNUS</i>	78	142	396	440	330	1,386	0.02%
DEBRIS, FISHING GEAR	<i>FISHING GEAR DEBRIS</i>	374	329	201	82	322	1,308	0.02%
SHARK, NK	<i>SQUALIFORMES</i>	520		314		426	1,260	0.02%
MACKEREL, ATLANTIC	<i>SCOMBER SCOMBRUS</i>	129	36	386	284	403	1,238	0.02%
DORY, BUCKLER (JOHN)	<i>ZENOPSIS CONCHIFERA</i>	75		427	79	647	1,228	0.02%
SHARK, THRESHER	<i>ALOPIAS VULPINUS</i>	143	61	-	150	736	1,089	0.01%
SKATE, THORNY	<i>RAJA RADIATA</i>	67	545	11	189	214	1,027	0.01%
BASS, STRIPED	<i>MORONE SAXATILIS</i>	17	267	149	292	274	999	0.01%
STURGEON, NK	<i>ACIPENSERIDAE</i>	-	440	160	35	315	950	0.01%
SCALLOP, SEA	<i>PATINOPECTEN, PLACOPECTEN SP</i>	264	248	252	61	106	930	0.01%
SHARK, BLUE (BLUE DOG)	<i>PRIONACE GLAUCA</i>	435		225	140	50	850	0.01%
SHARK, ATL ANGEL	<i>SQUATINA DUMERILI</i>	108	219	88	209	202	826	0.01%
SHARK, CARCHARHINID,NK	<i>CARCHARHINUS SP</i>	195		120	-	505	820	0.01%
HAKE, SILVER (WHITING)	<i>MERLUCCIOUS BILINEARIS</i>	338	141	36	191	94	800	0.01%
CRAB, SPIDER, NK	<i>LIBINIA PELIA SP</i>	47	123	13	141	384	709	0.01%
FLOUNDER, SAND DAB (WINDOWPANE)	<i>SCOPHTALMUS AQUOSUS</i>	203	106	192	88	119	707	0.01%

SHARK, TIGER	<i>GALEOCERDO CUVIER</i>	700					700	0.01%
CRAB, NORTHERN STONE	<i>LITHODES MAJA</i>	72	65	188	75	250	651	0.01%
SCUP	<i>STENOTOMUS CHRYSOPS</i>	10	9	477	66		562	0.01%
CRAB, CANCER, NK	<i>CANCER SP</i>	78	175	135	143	7	538	0.01%
DEBRIS, ROCK	<i>ROCK DEBRIS</i>	143	69	165	89	30	496	0.01%
SPONGE, NK	<i>PORIFERA</i>	118	59	81	27	195	480	0.01%
SHELL, NK	<i>SHELL</i>	131	138	80	69	44	462	0.01%
RAY, TORPEDO	<i>TORPEDO NOBILIANA</i>	32	98	83	65	163	441	0.01%

Table 12. Trawl catch composition data 2015-2019 in pounds of observed catch. Target species are highlighted in green, including “Skates NK” as these are primarily winter or little skate, main primary species are highlighted in yellow, and all minor species or groups are in white. As minor species have not been assessed, they are also not classified as primary or secondary.

Species	Scientific Name	2015	2016	2017	2018	2019	Total	Percentage of total
SKATE, NK	<i>RAJIDAE</i>	930310	590325	711823	918325	1132128	4282911	46.7%
SKATE, LITTLE	<i>LEUCORAJA ERIANCEA</i>	445455	263160	206478	169803	294958	1379854	15.1%
SKATE, WINTER (BIG)	<i>LEUCORAJA OCELLATA</i>	299280	196241	271316	145889	256518	1169244	12.8%
SKATE, LITTLE/WINTER, NK	<i>LEUCORAJA</i>	113757	29380	56928	39261	74617	313943	3.4%
FLOUNDER, SUMMER (FLUKE)	<i>PARALICHTHYS DENTATUS</i>	43016	21067	40386	39878	108911	253259	2.8%

SCUP	<i>STENOTOMUS CHRYSOPS</i>	12250	26622	54460	37273	74863	205468	2.2%
MONKFISH (GOOSEFISH)	<i>LOPHIUS AMERICANUS</i>	23136	20726	88129	19397	44394	195782	2.1%
DOGFISH, SPINY	<i>SQUALUS ACANTHIAS</i>	46393	39528	24955	22480	61684	195040	2.1%
FLOUNDER, WINTER (BLACKBACK)	<i>PLEURONECTES AMERICANUS</i>	36270	22491	39514	14525	38912	151712	1.7%
SEA ROBIN, NORTHERN	<i>PRIONOTUS CAROLINUS</i>	4547	5079	11132	13380	51227	85365	0.9%
FLOUNDER, SAND DAB (WINDOWPANE)	<i>SCOPHTALMUS AQUOSUS</i>	12854	12423	18601	17545	23408	84830	0.9%
FISH, NK	<i>OSTEICHTHYES</i>	18325	10000	37503	5992	619	72440	0.8%
SKATE, BARNDOR	<i>RAJA LAEVIS</i>	14470	5928	23219	8851	16908	69376	0.8%
SCALLOP, SEA	<i>PATINOPECTEN, PLACOPECTEN SP</i>	10245	5107	5788	5989	15865	42993	0.5%
HADDOCK	<i>MELANOGRAMMUS AEGLEFINUS</i>	5655	22159	9116	1263	2562	40755	0.4%
SEA BASS, BLACK	<i>CENTROPRISTIS STRIATA</i>	3920	6487	9465	5636	14839	40347	0.4%
FLOUNDER, FOURSPOT	<i>PARALICHTHYS OBLONGUS</i>	9034	4258	9862	5782	11391	40327	0.4%
LOBSTER, AMERICAN	<i>HOMARUS AMERICANUS</i>	10091	3990	5791	6828	11737	38437	0.4%
SEA ROBIN, STRIPED	<i>PRIONOTUS EVOLANS</i>	2564	5885	13484	3480	9394	34806	0.4%
DOGFISH, SMOOTH	<i>MUSTELUS CANIS</i>	3846	2530	6544	7162	13619	33702	0.4%
HAKE, SILVER (WHITING)	<i>MERLUCCIIUS BILINEARIS</i>	6505	792	3494	4012	17266	32069	0.3%
SKATE, CLEARNOSE	<i>RAJA EGLANTERIA</i>	3377	5325	2531	6898	12174	30305	0.3%
CRAB, JONAH	<i>CANCER BOREALIS</i>	6125	3840	7103	3851	7889	28808	0.3%

SQUID, ATL LONG-FIN	<i>LOLIGO PEALEI</i>	1004	1470	8915	281	16977	28647	0.3%
COD, ATLANTIC	<i>GADUS MORHUA</i>	9678	2817	4241	5607	1721	24065	0.3%
FLOUNDER, YELLOWTAIL	<i>PLEURONECTES FERRUGINEUS</i>	9579	2535	4569	3443	1590	21715	0.2%
SCULPIN, LONGHORN	<i>MYOXOCEPHALUS OCTODECIMSPINOSUS</i>	6537	3915	4163	2063	3365	20042	0.2%
BUTTERFISH	<i>PEPRILUS TRIACANTHUS</i>	1223	354	13460	509	2994	18540	0.2%
CRAB, ROCK	<i>CANCER IRROGATUS</i>	2853	3061	2415	1365	8651	18345	0.2%
HAKE, RED (LING)	<i>UROPHYCIS CHUSS</i>	6941	571	1343	2007	4608	15471	0.2%
CRAB, HORSESHOE	<i>LIMULUS POLYPHEMUS</i>	9983	953	1009	731	1279	13955	0.2%
DEBRIS, FISHING GEAR	<i>FISHING GEAR DEBRIS</i>	2404	1662	1437	2847	5109	13459	0.1%

Among the two gear types there are three main primary species, and no main secondary species. A summary of status, management and information for each of the main primary species is given below.

Spiny dogfish (*Squalus acanthias*). Information adapted from:

<https://www.fisheries.noaa.gov/species/atlantic-spiny-dogfish> unless otherwise indicated.

The Atlantic spiny dogfish fishery operates from Maine to Florida and from inshore to offshore waters on the edge of the continental shelf. The spiny dogfish fishery uses predominantly bottom gillnets, with lesser amounts caught by trawls and hook gear. According to the 2018 stock assessment (Sosebee and Rago 2018), Atlantic spiny dogfish are not overfished and are not subject to overfishing. NOAA Fisheries, the Mid-Atlantic and New England Fishery Management Councils, and the Atlantic States Marine Fisheries Commission manage the Atlantic spiny dogfish fishery. The MAFMC leads the joint management of the Spiny Dogfish Fishery Management Plan with management measures including permitting requirements, annual catch limits and quota, as well as trip limits. The Atlantic States Marine Fisheries Commission implements the Interstate FMP for Spiny Dogfish in state waters, establishing complementary regulations to the federal regulations. Atlantic spiny dogfish has been MSC certified since August 2012.

Barndoor skate (*Dipturus laevis*). Information adapted from:

<https://www.fisheries.noaa.gov/species/northeast-skate-complex> unless otherwise indicated.

Barndoor skate is part of the Northeast skate complex consisting of seven skate species (including Winter and Little skates—the targets of this MSC fishery assessment). The fishery operates from Maine to Cape Hatteras, North Carolina; from inshore to offshore waters on the edge of the continental shelf. Skate is mostly harvested incidentally in trawl and gillnet fisheries targeting groundfish, monkfish, and sometimes scallops. The Northeast skate complex fishery is managed by the NEFMC, with NOAA Fisheries serving as the implementing body for rules and regulations within the fishery. The fishing year runs from May 1 through April 30, with NOAA Fisheries Greater Atlantic Region jurisdiction covering from Maine to Cape Hatteras, North Carolina (35° 15.3' N latitude). The fishery is managed using separate possession limits and coastwide quotas for both the wing and bait fisheries, with different seasonal quota periods for each. The skate fishery is also indirectly managed by limiting fishing effort through days-at-sea (DAS) fisheries (Northeast multispecies, monkfish, and scallops). While there are no specified management areas for the fishery, vessels fishing for skates in federal waters must also comply with Northeast multispecies, monkfish, or scallop regulations when fishing under a DAS for one of those fisheries. These include seasonal and year-round closures, Essential Fish Habitat (EFH) closures, and transiting/gear storage requirements. The Northeast Skate Complex Fishery Management Plan (FMP) requires the annual specification of catch and harvest limits for up to two years at a time. If specifications are not in place at the start of the fishing year, the existing specifications roll over until new regulations are finalized.

Monkfish (*Lophius americanus*). Information adapted from:

<https://www.fisheries.noaa.gov/species/monkfish> unless otherwise indicated.

The commercial monkfish fishery in the U.S. operates from Maine to North Carolina out to the continental margin. Trawl gear is primarily used in northern waters, and gillnet gear in southern waters. It is common for monkfish to be caught in conjunction with groundfish. The monkfish fishery is managed using a days-at-sea and trip limit management system. NOAA Fisheries NEFMC and MAFMC manage the monkfish fishery. The NEFMC has the lead for developing measures in the monkfish fishery management plan wherein management measures include management areas, annual catch limits, limited access permits, size limits, landing limits and measures to reduce bycatch and impacts on habitat. According to the 2013 stock assessment, monkfish are not overfished and are not subject to overfishing in either of the northern or southern areas.

Table 13 is a summary of main primary species information relative to key metrics for scoring PI 2.1.1. For this indicator the probability requirements for the stock being above the point of recruitment impairment (i.e., Blim, or SSBmsy/2 as a default proxy) are 70th, 80th, and 90th, for a score of 60, 80 and 100,

respectively. Minor primary species have not been evaluated in this assessment, hence only scoring issue a. for PI 2.1.1. is relevant.

Table 13. Summary of main primary species information relative to key metrics for scoring PI 2.1.1.

Stock	SSB or proxy value (year of most recent stock assessment)	Stock relative to PRI	Reference	Score for 2.1.1.a
Spiny dogfish	Female SSB 77,200 mt (low estimate with low certainty; 2018)	Biomass/PRI (1/2B _{msy}) =1.41	Sosebee and Rago 2018	80
Barndoor skate	0.96 (survey index value; 2007) old assessment, low certainty	B _{current} (index)/B _{threshold} (index)= 0.96/0.81= 1.18	NMFS 2007	80
Monkfish	Biomass estimate 88,806mt (southern region; high uncertainty; 2013)	Biomass/B _{threshold} =2.47 (southern region)	NEFSC 2013	80

Endangered Threatened and Protected (ETP) and other out of scope species

Table 14 below contains a list of all “out of scope” species with observed interactions with the gillnet fishery between 2015 and 2019. None of the seabirds listed qualify for ETP classification, and thus are scored as “secondary main” species. Mammals and reptiles are all federally protected, thus scored under ETP. Other information in this table includes the population status of the species (increasing, stable, or decreasing, if known) and its Potential Biological Removal (PBR) if applicable. Various sources have been used to compile this table, and they are listed in the Principle 2 references section of the report.

Table 14. Observer-recorded annual gillnet interactions with ETP and other out of scope species from 2015 to 2019. Seabird annual mortality estimates are extrapolated from the 5-year average based on observer coverage rate of 12%. Mammal estimates of annual mortality are taken from the respective stock assessment documents.

Common Name	Scientific Name	2015	2016	2017	2018	2019	Total	Average	Population trend	PBR if applicable	Estimated annual mortality 2015-2016*
SHEARWATER, GREATER	<i>PUFFINUS GRAVIS</i>	189	70	793	13	107	1172	234.4	Stable		600
SHEARWATER, SOOTY	<i>PUFFINUS GRISEUS</i>	2	2	77	3	1	85	17	Decreasing		7-12
BIRD, NK	<i>AVES</i>	0	0	13	0	0	13	2.6			
SCOTER, WHITE-WINGED	<i>MELANITTA DEGLANDI</i>	0	0	1	9	0	10	2	Decreasing		17
SCOTER, BLACK	<i>MELANITTA NIGRA</i>	0	0	0	7	0	7	1.4	Decreasing		13
EIDER, COMMON	<i>Somateria mollissima</i>	0	0	1	0	5	6	1.2	Unknown		
MURRE, THIN-BILLED	<i>URIA AALGE</i>	2	2	0	0	0	4	0.8	Increasing		12.5-16
LOON, COMMON	<i>GAVIA IMMER</i>	0	0	1	2	1	4	0.8	Stable		13.5
SHEARWATER, NK	<i>PUFFINUS SP</i>	3	0	0	0	0	3	0.6			
SHEARWATER, CORYS	<i>PUFFINUS DIOMEDEA</i>	3	0	0	0	0	3	0.6	Decreasing		
GULL, NK	<i>LARINAE</i>	0	1	0	1	0	2	0.4			
SHEARWATER, MANX	<i>PUFFINUS PUFFINUS</i>	0	0	1	0	0	1	0.2	Unknown		
GULL, HERRING	<i>LARUS ARGENTATUS</i>	1	0	0	0	0	1	0.2	Decreasing		11.9
FULMAR, NORTHERN	<i>FULMARUS GLACIALIS</i>	1	0	0	0	0	1	0.2	Increasing		5.7
SEAL, GRAY	<i>HALICHOERUS GRYPUS</i>	79	9	20	8	45	161	32.2	Increasing	1,389	899
	<i>PHOCA VITULINA</i>								Unknown but likely not declining	2,006	311
SEAL, HARBOR	<i>CONCOLOR</i>	7	4	4	0	4	19	3.8			
SEAL, NK	<i>PHOCIDAE</i>	6	0	4	4	3	17	3.4			
SEAL, HARP	<i>PHOCA GROENLANDICA</i>	8	0	0	0	4	12	2.4	Stable	Unknown	65
PORPOISE, HARBOR	<i>PHOCOENA PHOCOENA</i>	5	3	0	0	3	11	2.2	Unknown	706	193

DOLPHIN, COMMON (OLD SADDLEBACK)	<i>DELPHINUS DELPHIS (COMMON)</i>	0	3	2	1	1	7	1.4	Unknown	557	97
DOLPHIN, NK (MAMMAL)	<i>DELPHINIDAE</i>	2	0	0	0	0	2	0.4			
TURTLE, LOGGERHEAD	<i>CARETTA CARETTA</i>	4	1	0	0	1	6	1.2			557**
TURTLE, NK HARD-SHELL	<i>CHELONIIDAE</i>	1	0	0	0	1	2	0.4			88**
TURTLE, KEMPS RIDLEY	<i>LEPIDOCHELYS KEMPI</i>	1	0	0	0	0	1	0.2			115**
TURTLE, LEATHERBACK	<i>DERMOCHELYS CORIACEA</i>	0	1	0	0	0	1	0.2			21**

*Estimates for seabird mortalities from Sigourney et. al. (2019) for northeast gillnet fisheries with skates as targets, including all seasons. Note these estimates are derived from 2015 and 2016 observer data, so are only available for some seabird species. Annual mortality rate estimates for marine mammals are from the respective marine mammal stock assessment reports.

**Turtle mortality estimates are from Murray (2018) and reported as TOTALS for the entire Atlantic coast sink gillnet fishery over the period 2012-2016.

Common Name	Scientific Name	Year					Total	Population trend	PBR	Estimated annual mortality 2013-2017
		2015	2016	2017	2018	2019				
DOLPHIN, COMMON (OLD SADDLEBACK)	<i>DELPHINUS DELPHIS (COMMON)</i>	0	0	0	0	2	2	Unknown	577	14
SHEARWATER, GREATER	<i>PUFFINUS GRAVIS</i>	0	0	0	0	1	1	Stable		
SEAL, GRAY	<i>HALICHOERUS GRYPUS</i>	0	0	2	1	0	3	Increasing	1,389	16
DOLPHIN, WHITE-SIDED	<i>LAGONORHYNCHUS ACUTUS</i>	0	3	0	0	0	3	unknown	544	21

Seabirds

Fourteen seabird species have been classified as secondary main, as they are known to interact with the fishery and they are not classified as Endangered, Threatened, or Protected. Table 16 lists these species, together with observed interactions over the period from 2015-2019; an estimate of total mortality from the fishery based on observer coverage rates; and their population trends, if known. The **greater shearwater** (*Puffinus gravis*) is by far the seabird with the most recorded and estimated interactions with the gillnet fisheries, accounting for more than half of all seabird bycatch in the greater Atlantic region (Benaka et. al. 2019). Its population is estimated as stable at around 15 million individuals and is classified as “least concern” on the IUCN red list because of its extremely large range, and stable and large population size.

Of the remaining species, the population sizes of **northern fulmar** (*Fulmarus glacialis*), **common loon** (*Gavia immer*) and **thin-billed (common) murre** (*Uria aalge*) are either stable or improving, and all are “least concern” on the IUCN red list. Catches of these species in these fisheries under assessment are likely in the single digits annually.

Population trends for common eider (*Somateria mollissima*), and Manx shearwater (*Puffinus puffinus*) are unknown. **Common eider** has a population size of 3.1-3.8 million globally and is near threatened on the IUCN red list, though this is due to decreases in population in Europe (overfishing is listed as one of the threats), thought to be compensated for at least partly by increases elsewhere in the world. An average of 1.2 common eiders annually have been observed as taken in these fisheries over the past 5 years, and total average annual take is estimated at roughly 10 individuals. Therefore, although it is not necessarily highly likely that these birds are above biologically based limits, the low incidence of interactions with these fisheries means they are highly unlikely to be hindering recovery and the SG80 is met. **Manx shearwater** has an extremely large range and a population size of between 680,000 and 790,000 individuals globally. It is evaluated as least-concern on the IUCN red list due to its large range and population size. Though the population trend is unknown, it is not thought to be declining at a rate necessary to consider reclassification as near threatened. These UoAs have had one observed interaction with Manx shearwater over the past 5 years and based on this, they are estimated to take less than 5 annually.

Populations of sooty shearwater (*Puffinus griseus*), white-winged scoter (*Melanitta deglandi*), black scoter (*Melanitta nigra*), Cory’s shearwater (*Puffinus Diomedea*), and herring gull (*Larus argentatus*) are all thought to be decreasing across their ranges. All are observed in very small numbers in the UoA fisheries. **Herring gull** has a global population of 1.37-1.62 million individuals and IUCN red-list “least concern”. Although the population trend appears to be decreasing, the decline is currently thought to be part of a longer-term fluctuation following previous increases. Its range is throughout northern Europe, so interaction with a fishery in the western Atlantic seems unusual. There was only one interaction recorded in 2015 over the five most recent fishing years. It is extremely unlikely that this fishery would be hindering any recovery or that recovery is necessary for this species. The SG80 is met. **Sooty shearwater** has a global population of roughly 20 million individuals. This species is classified as Near Threatened on the IUCN red list because it is thought to have undergone a moderately rapid decline owing to the impact of fisheries, the harvesting of its young for traditional purposes in New Zealand (trapping and killing an estimated 250 thousand birds per year) and possibly climate change. According to Sigourney et. al. (2019), there were approximately 7-12 sooty shearwaters killed in skate gillnet fisheries each year in 2015 and 2016. It is thus highly unlikely that these fisheries are hindering the recovery of this species and the SG80 is met. The population size of **white-winged scoter** is unknown. Although it is thought to be declining, the rate of decline is not sufficiently rapid to approach the thresholds for vulnerable under the IUCN population trend criterion. The distribution of this species extends along both the Pacific and Atlantic US and Canadian coasts of North America and they breed in north-western Canada and Alaska, where there is subsistence harvest and sport take of birds from breeding colonies (also for black scoters) According to Koneff et. al (2017) white-winged scoters are at moderate risk of overharvest (direct take for subsistence or sport) and estimated an “allowable harvest” level of 13,068 birds. The average annual mortality for this species from the Northeast gillnet fishery is likely around 17 individuals. Koneff et. al. (2017) also included eastern and western **black scoter** in their analysis of harvest and information needs for North American sea ducks. They evaluated eastern black scoter as lowest risk of overharvest with an estimated allowable harvest of 39,062 individuals. This species is listed as near threatened on the IUCN red list and has a global

population of 530,000-830,000 individuals. Black scoters are subject to a combination of threats and ongoing impacts. These include contaminants in the food chain, subsistence harvest, sport harvest, and habitat disturbance and fragmentation, including large-scale habitat disturbance from resource-extraction industries in the Bering Sea of Alaska and in north-central Canada, and hydrologic projects in northern Quebec (Sea Duck Joint Venture 2016). Hunting accounts for roughly 15,000 black scoter mortalities annually. The northeast gillnet fishery likely takes roughly 13 individuals annually.

Seabird management

Migratory bird conventions impose substantive obligations on the United States for the conservation of migratory birds and their habitats, and through the Migratory Bird Treaty Act (Act), the United States has implemented these migratory bird conventions with respect to the United States. Executive Order 13186 (2012) directs executive departments and agencies to take certain actions to further implement the Act. Relevant to NOAA and NOAA fisheries, this executive order includes the following directions:

...identify where unintentional take reasonably attributable to agency actions is having, or is likely to have, a measurable negative effect on migratory bird populations, focusing first on species of concern, priority habitats, and key risk factors. With respect to those actions so identified, the agency shall develop and use principles, standards, and practices that will lessen the amount of unintentional take, developing any such conservation efforts in cooperation with the Service. These principles, standards, and practices shall be regularly evaluated and revised to ensure that they are effective in lessening the detrimental effect of agency actions on migratory bird populations. The agency also shall inventory and monitor bird habitat and populations within the agency's capabilities and authorities to the extent feasible to facilitate decisions about the need for, and effectiveness of, conservation efforts;

To this end, the National Seabird Program within NOAA fisheries has been developed. The following text is excerpted from the National Seabird Program website:

<https://www.fisheries.noaa.gov/national/bycatch/seabirds>

The National Seabird Program, formed in 2001, comprises managers and scientists from across NOAA Fisheries working domestically and internationally to protect and conserve seabirds. Activities are guided by a number of statutes and agency priorities, and the program has two overarching goals:

Monitor and Mitigate Bycatch: NOAA Fisheries is directly responsible for monitoring and mitigating bycatch in U.S. fisheries and supports a variety of international agreements and Regional Fisheries Management Organizations to mitigate bycatch associated with non-U.S. fisheries.

Promote Seabirds as Ecosystem Indicators: Seabirds are excellent indicators of ecosystem status. As highly migratory, near-apex predators, they travel across trophic levels, space, and time, and are easily studied relative to other marine species. This makes them excellent sources of information for ecosystem-based fisheries management plans, a holistic framework for ensuring that our fisheries are sustainable.

The National Seabird Program has representatives who sit on various working groups and steering committees focused on national and international coordination of efforts to manage and conserve seabirds. The National Seabird Program is a nationally coordinated program that benefits from significant leveraging at the regional level.

Included in the National Seabird Program are several national and regional initiatives aimed at reducing seabird bycatch, including in New England and the Mid-Atlantic, however, longline fisheries are the current highest priority for seabird bycatch reduction action.

Seabird mortalities in all fisheries are monitored and recorded as part of the standard protocols of the Northeast Fisheries Observer Program.

ETP Species

The legislative basis for the protection of ETP species is found in the Endangered Species Act (ESA) and the Marine Mammal Protection Act (MMPA).

Endangered Species Act (ESA)

NOAA's Office of Protected Resources (OPR) is the program responsible for protecting marine mammals and endangered/threatened marine life. The OPR works in cooperation with NOAA regional offices and science centers. Responsibilities of the program include listing species under the ESA and designating critical habitat, developing and implementing recovery plans for listed species; consulting on any Federal actions that may affect a listed species to minimize the effects of the action; investigating violations of the ESA and authorizing research on protected species.

The ESA, signed on 1973, provides for the conservation of species that are endangered or threatened the conservation of the ecosystems on which they depend. NOAA has jurisdiction over 159 endangered and threatened marine species and works with the U.S. Fish and Wildlife Service (USFWS) to manage ESA-listed species. Generally, NOAA manages marine species, while USFWS manages land and freshwater species. When a species is listed as endangered it is illegal to "take" (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to do these things) that species. Section 10 of the ESA allows NOAA Fisheries Service to issue permits for incidental take (Incidental Take Statements; ITS), with the requirement of a conservation plan to minimize and mitigate impacts to the affected species. Section 4(f) ESA directs NOAA's National Marine Fisheries Service (NMFS) to develop and implement recovery plans for threatened and endangered species. NMFS' Office of Law Enforcement works with the U.S. Coast Guard and other partners to enforce and prosecute ESA violations (NOAA).

Recovery plans are to include: (1) a description of site-specific management actions necessary to conserve the species or populations; (2) objective, measurable criteria which, when met, will allow the species or populations to be removed from the endangered and threatened species list; and (3) estimates of the time and funding required to achieve the plan's goals. Each ESA-listed species has a recovery plan, and regular updates on progress toward recovery.

Marine Mammal Protection Act (MMPA)

The Marine Mammal Protection Act (MMPA), enacted in 1972, protects all marine mammals. Similarly to the ESA, the MMPA prohibits the "take" of marine mammals, with certain exceptions, including special cases for subsistence, scientific research, and permits authorizing incidental take of marine mammals to commercial fishing operations. For a more detailed explanation of the MMPA is see the Marine Mammals Section.

There is a formal review in place to evaluate the impact of fisheries on ETP species, to measure the performance of the measures implemented and to take corrective actions as necessary. These reviews are documented in Biological Opinions (BO) given within the ESA Section 7 consultation.

The NMFS Office of Protected Species collects and analyses data on interactions between fisheries and ETP species using data primarily from observer programs and logbooks in commercial fisheries, scientific surveys at sea, standings on shore.

The Marine Mammal Protection Act (MMPA) classifies commercial fisheries on its List of Fisheries (LOF) each year, according to the level of mortality and serious injury of marine mammals that occur in the given fishery. The classification of the fishery on the LOF determines whether participants in that fishery are subject to certain provisions of the MMPA, such as registration, observer coverage, and take reduction plan (TRP) requirements. The Northeast sink gillnet fishery is classified as Category I under the LOF, and the Northeast bottom trawl fishery is Category II. The classification is given based on the marine mammal for which the expected impact is highest:

Category I: Annual mortality and serious injury of a stock in a given fishery is greater than or equal to 50 percent of the PBR level (*i.e.*, frequent incidental mortality and serious injury of marine mammals).

Category II: Annual mortality and serious injury of a stock in a given fishery is greater than 1 percent and less than 50 percent of the PBR level (*i.e.*, occasional incidental mortality and serious injury of marine mammals).

Category III: Annual mortality and serious injury of a stock in a given fishery is less than or equal to 1 percent of the PBR level (*i.e.*, a remote likelihood of or no known incidental mortality and serious injury of marine mammals).

Although the Northeast sink gillnet fishery interacts with a number of marine mammal species, the basis for its classification as Category I is interactions with western north Atlantic gray seals. For the Northeast bottom trawl fishery, the basis for classification as Category II is interactions with western north Atlantic white-sided dolphins (see Table 15).

Table 15. MMPA LOF excerpt for UoA fisheries. The species determining level of classification is underlined for each fishery, while those species with documented interactions in the past 5 years are given in *italics*.

Fishery Description	Estimated # of Vessels/Persons	Marine Mammal Species and Stocks Incidentally Killed or Injured
Northeast sink gillnet (Category I)	3,163	Bottlenose dolphin, WNA offshore <i>Common dolphin, WNA</i> Fin whale, WNA <u>Gray seal, WNA¹</u> <i>Harbor porpoise, GME/BF</i> <i>Harbor seal, WNA</i> <i>Harp seal, WNA</i> Humpback whale, Gulf of Maine Minke whale, Canadian east coast North Atlantic right whale, WNA Risso's dolphin, WNA White-sided dolphin, WNA
Northeast bottom trawl (Category II)	2,238	Bottlenose dolphin, WNA offshore <i>Common dolphin, WNA</i> <i>Gray seal, WNA</i> Harbor porpoise, GME/BF Harbor seal, WNA Harp seal, WNA Long-finned pilot whale, WNA Risso's dolphin, WNA <u>White-sided dolphin, WNA¹</u>

For the sink gillnet fishery, of the species listed on the above table, there are documented interactions with common dolphins, gray seals, harbor seals, harp seals, and harbor porpoises in the observer data from the past five years. From this list, common dolphin, white-sided dolphin, and gray seal interactions have been recorded for the past five years in the Northeast bottom trawl fishery.

Gray seals

Information in this section is excerpted or summarized from the 2019 stock assessment report for gray seals:

Gray seals are not listed as threatened or endangered under the Endangered Species Act, and the western North Atlantic stock is not considered strategic under the Marine Mammal Protection Act. The U.S. portion of 2013–2017 average annual human-caused mortality and serious injury in U.S. waters does not exceed the portion of PBR in U.S. waters. The status of the gray seal population relative to OSP in U.S. Atlantic EEZ waters is unknown, but the stock's abundance appears to be increasing in Canadian and U.S. waters. Total fishery-related mortality and serious injury for this stock is not less than 10% of the calculated PBR and, therefore, cannot be considered to be insignificant and approaching zero mortality and serious injury rate.

Gray seal bycatch in the northeast sink gillnet fishery was usually observed in the first half of the year in waters to the east and south of Cape Cod, Massachusetts in 12-inch gillnets fishing for skates and monkfish. The northeast sink gillnet fishery contributes an estimated 899 (of an estimated total US of 946) mortalities to gray seals annually, of a PBR of 1,389. Vessels in the North Atlantic bottom trawl fishery were observed in order to meet fishery management, rather than marine mammal management needs. Three gray seal mortalities have been recorded over the past 5 years, with an estimated total annual mortality of 16 individuals.

Other sources of mortality include human interactions, storms, abandonment by the mother, disease, and shark predation. Mortalities caused by human interactions include research mortalities, boat strikes, fishing gear interactions, power plant entrainment, oil spill/exposure, harassment, and shooting. Seals entangled in netting are common at haul-out sites in the Gulf of Maine and Southeastern Massachusetts. From 2013 to 2017, 603 gray seal stranding mortalities were recorded, extending from Maine to North Carolina (Table 4; NOAA National Marine Mammal Health and Stranding Response Database, accessed 23 October 2018). Most stranding mortalities were in Massachusetts, which is the center of gray seal abundance in U.S. waters. Sixty-three (10%) of the total stranding mortalities showed signs of human interaction (17 in 2013, 8 in 2014, 20 in 2015, 1 in 2016 and 17 in 2017), 35 of which had some indication of fishery interaction (9 in 2013, 2 in 2014, 14 in 2015, 0 in 2016 and 10 in 2017). One gray seal is recorded in the stranding database during the 2013 to 2017 period as having been shot—in Maine in 2015. Another gray seal mortality due to shooting in Maine in 2016 was prosecuted by NOAA law enforcement. In an analysis of mortality causes of stranded marine mammals on Cape Cod and southeastern Massachusetts between 2000 and 2006, Bogomolni et al. (2010) reported that 45% of gray seal stranding mortalities were attributed to human interaction.

Harbor seals

Information in this section is excerpted or summarized from the 2019 stock assessment report for harbor seals:

Harbor seals are not listed as threatened or endangered under the Endangered Species Act, and the western North Atlantic stock is not considered strategic under the Marine Mammal Protection Act. The 2013–2017 average annual human-caused mortality and serious injury does not exceed PBR. The status of the western North Atlantic harbor seal stock, relative to OSP, in the U.S. Atlantic EEZ is unknown. Total fishery-related mortality and serious injury for this stock is not less than 10% of the calculated PBR and, therefore, cannot be considered to be insignificant and approaching zero mortality and serious injury rate.

Harbor seal bycatch in the Northeast sink gillnet fishery is observed year-round, most frequently in the summer in groundfish trips occurring between Boston, Massachusetts, and Maine in coastal Gulf of Maine waters. This fishery takes an estimated 311 individuals annually, with a total of 19 observed mortalities over the past 5 years. In the Northeast bottom trawl fishery, harbor seal takes are occasionally observed, with an estimated take of 3 individuals annually, with no observations occurring in the past 5 years.

Other sources of mortality are not generally reported, except for historic bounty-hunting in New England waters ending in the mid-1960s, which may have caused a severe decline at that time. Of 1,214 harbor seal stranding mortalities reported between Maine and Florida, about 13% have been attributed to human interactions, with no quantification of how much of this has been attributed to fishing.

Harp seals

Information in this section is excerpted or summarized from the 2019 stock assessment report for harp seals:

Harp seals are not listed as threatened or endangered under the Endangered Species Act and the western North Atlantic stock is not considered strategic under the Marine Mammal Protection Act. The level of human-caused mortality and serious injury in the U.S. Atlantic EEZ is low relative to the total stock size. The status of the harp seal stock, relative to OSP, in the U.S. Atlantic EEZ is unknown, but the stock's abundance appears to have stabilized. The total U.S. fishery-related mortality and serious injury for this stock is very low relative to the stock size and can be considered insignificant and approaching zero mortality and serious injury rate. Based on the low levels of uncertainties, it expected these uncertainties will have little effect on the status of this stock.

In the Northeast sink gillnet fishery, approximately 65 mortalities occur annually, while in the Northeast bottom trawl fishery, there are no estimated annual takes.

Between 2013 and 2017, 194 stranding mortalities were reported, eleven of which showed signs of human interaction, and one of which had some sign of fishery interaction.

Harbor porpoises

Information in this section is excerpted or summarized from the 2019 stock assessment report for harbor porpoises:

Harbor porpoise in the Gulf of Maine/Bay of Fundy are not listed as threatened or endangered under the Endangered Species Act, and this stock is not considered strategic under the MMPA. The total U.S. fishery-related mortality and serious injury for this stock is not less than 10% of the calculated PBR and, therefore, cannot be considered to be insignificant and approaching zero mortality and serious injury rate. The status of harbor porpoises, relative to OSP, in the U.S. Atlantic EEZ is unknown. Population trends for this species have not been investigated.

In the Northeast sink gillnet fishery, approximately 193 mortalities occur annually, with 11 observed mortalities occurring in the past 5 years. Harbor porpoise bycatch in the northern Gulf of Maine occurs primarily from June to September, while in the southern Gulf of Maine and south of New England, bycatch occurs from January to May and September to December. In the Northeast bottom trawl fishery, an estimated 3.2 mortalities occur annually, with none having been recorded in the past 5 years. Since 1989, harbor porpoise mortalities have been observed in the northeast bottom trawl fishery, but many of these were not attributable to this fishery because decomposed animals are presumed to have been dead prior to being taken by the trawl. Those infrequently caught freshly dead harbor porpoises have been caught during January to April on Georges Bank or in the southern Gulf of Maine.

The PBR for this stock in US waters is 706 individuals.

Common dolphins

Information in this section is excerpted or summarized from the 2019 stock assessment report for common dolphins:

Common dolphins are not listed as threatened or endangered under the Endangered Species Act, and the Western North Atlantic stock is not considered strategic under the Marine Mammal Protection Act. The

2013–2017 average annual human-related mortality does not exceed PBR. The total U.S. fishery-related mortality and serious injury for this stock is not less than 10% of the calculated PBR and, therefore, cannot be considered to be insignificant and approaching zero mortality and serious injury rate. The status of common dolphins, relative to OSP, in the U.S. Atlantic EEZ is unknown. Population trends for this species have not been investigated.

In the Northeast sink gillnet fishery, approximately 97 mortalities occur annually, with an average of 1.4 observed mortalities annually over the past 5 years. In the Northeast bottom trawl fishery, approximately 14 mortalities are estimated to occur annually, with 2 observed mortalities in the past 5 years recorded.

From 2013 to 2017, 608 common dolphins were reported stranded between Maine and Florida (Table 3; (NOAA National Marine Mammal Health and Stranding Response Database unpublished data, accessed 23 October 2018). The total includes mass-stranded common dolphins in Massachusetts during 2013 (a total of 9 in 3 events), 2014 (a total of 14 in 4 events), 2015 (a total of 37 in 13 events), and 2016 (a total of 35 animals in 9 events), and 2 mass strandings in Virginia in 2013 (a total of 6 in 2 events). Animals released or last sighted alive include 13 animals in 2013, 12 in 2014, 9 in 2015, 23 in 2016 and 70 in 2017. In 2013, 10 cases were classified as human interaction, 4 of 225 which were fishery interactions. In 2014, 5 cases were classified as human interaction, 1 of which was a fishery interaction. In 2015, 2 cases were classified as human interactions, both in Rhode Island. Seven cases in 2016 were coded as human interaction, 1 of which was a fishery interaction. Six cases in 2017 were coded as human interaction, 2 of which were classified as fishery interactions and 1 of which was classified as a boat collision.

White-sided dolphin

Information in this section is excerpted or summarized from the 2019 stock assessment report for white-sided dolphins:

White-sided dolphins are not listed as threatened or endangered under the Endangered Species Act. The Western North Atlantic stock of white-sided dolphins is not considered strategic under the Marine Mammal Protection Act. The estimated average annual human-related mortality does not exceed PBR and is less than 10% of the calculated PBR; therefore, it is considered to be insignificant and approaching zero mortality and serious injury rate. The status of white-sided dolphins, relative to OSP, in the U.S. Atlantic EEZ is unknown. A trend analysis has not been conducted for this species. Even with the levels of uncertainties regarding the stock structure within the western North Atlantic white-sided dolphin stock described above, it is expected these uncertainties will have little effect on the designation of the status of this population.

White-sided dolphin bycatch has been rare in the gillnet fishery, but when it occurred it was in both the Gulf of Maine and southern New England regions and mostly in non-summer (May–August) months. There have been no observed mortalities in this fishery in the past 5 years, though estimated mortality is 2.8 individuals annually. In the northeast bottom trawl fishery, white-sided dolphins have been bycaught year-round in the Gulf of Maine, where most occurred outside of summer (May–August) and offshore near the outer edge of the EEZ. An estimated 21 individuals are taken in this fishery annually, and this species is what is driving the Category II classification of this fishery on the MMPA LOF.

North Atlantic right whales were removed as a driver for the gillnet fishery's Category I classification in 2010. There have been no recorded interactions between the Northeast sink gillnet fishery and North Atlantic Right Whales in 25 years (MMPA LOF).

Sea Turtles

Interactions between the Northeast sink gillnet UoA and loggerhead, Kemp's Ridley, and Leatherback sea turtles have been recorded in observer data between 2015 and 2019 (Table 14), with the largest numbers of observations occurring with loggerhead turtles. Murray (2018) estimated both total bycatch and mortalities between 2012 and 2016 for the greater Atlantic region sink gillnet fisheries. She reported a total of 557 loggerhead mortalities, 115 Kemp's Ridley mortalities, 21 leatherback mortalities and 88 unidentified

hard-shelled turtle mortalities in total over this 5-year period. Eighty-seven percent of this bycatch was attributed to trips catching monkfish, skates, or spiny dogfish. It is important to note that this includes both the mid-Atlantic and Northeast sink gillnet fisheries, and the present gillnet UoA is the Northeast area only. Interactions between sea turtles and gillnets is higher in the southern Mid-Atlantic, in warm surface temperature water.

As is the case for all ESA-listed species, each sea turtle has a recovery plan including a description of site-specific management actions necessary to conserve the species or populations; objective, measurable criteria which, when met, will allow the species or populations to be removed from the ESA list; and estimates of the time and funding required to achieve the plan's goals.

For **loggerhead** turtles, the initial recovery plan was approved by NMFS in 1984, and it has been revised twice, with the most recent revision published in 2008 (NMFS 2008). This recovery plan identified four "recovery units" based on nesting geography, with the Northern Recovery Unit originating from nesting beaches from the Florida-Georgia border through southern Virginia—the northern extent of the nesting range. At the time the second revision to the recovery plan was published in 2008, there was strong statistical evidence to suggest the northern recovery unit had been experiencing a long-term decline, with year-over-year declines in nesting from daily beach surveys of roughly 1.3-1.9% since 1980. In July 2019, NMFS and the US Fish and Wildlife Service (USFWS) reconvened the NW Atlantic loggerhead recovery team to review progress toward recovery for this population of loggerhead turtles (Bolten, et. al. 2019). For the northern recovery unit, the 2019 progress report states there has been an annual rate of increase in number of nests of 1.3%, based on a log-linear regression model for 37 years of nesting data (1983-2019). This annual rate of increase is encouraging, but below the 2% criterion for achieving recovery.

Overall, major threats to loggerhead recovery continue to include beach armoring, shoreline stabilization structures, and other barriers to nesting, vessel strike mortalities, and marine debris ingestion and entanglement, as well as bycatch in commercial fisheries. The progress update acknowledges progress has been made to reduce loggerhead bycatch in some fisheries, including gillnet fisheries. However, the recovery team also acknowledges limited progress in other areas, such as developing and fully implementing a peer-reviewed strategy to minimize fishery interactions and mortality for each domestic commercial fishing gear type that has loggerhead bycatch. Other areas where progress has been limited is in developing, implementing and enforcing specific and comprehensive federal legislation to ensure long-term protection of loggerheads and their terrestrial and marine habitats. There has been progress at the state and local level on this front, including laws protecting nesting turtles, hatchlings and nesting habitat, however fishery bycatch reduction requirements are generally rooted in federal legislation.

There is a bi-national recovery plan for **Kemp's Ridley** turtles, shared between the US and Mexico, as the distribution and nesting habitat for this turtle is centered in the southern Gulf of Mexico. The recovery plan was first issued in 1984, and its most recent (2nd) revision was published in 2011 (NMFS 2011). In 2015, a 5-year review was published in which progress toward achieving the criteria necessary for downlisting or delisting this species on the ESA was reported (NMFS and USFWS 2015). Two criteria are necessary for downlisting from Endangered to Threatened status, one of which is met (recruitment of at least 300,000 hatchlings into the marine environment per season at the three primary nesting beaches), and one which is not met (at least 10,000 nesting females per season—currently there are fewer than half that many estimated). The criteria concerning protection of terrestrial nesting habitat, nesting females, and hatchlings are by-and-large successfully ongoing or have been met. Ongoing threats are thought to be in the marine environment, including from bycatch in fishing gear—particularly skimmer trawl gear for shrimp in the Gulf of Mexico and Northwest Atlantic. There have been no recent records of any turtles being caught in the Northeast bottom trawl UoA, most likely because they operate further north than the foraging range for this species (off Virginia and southward). The Northeast gillnet UoA has one recorded interaction with this species in the past 5 years, with the 115 coastwide gillnet mortalities estimated from 2012-2016 again probably coming from the mid-Atlantic and Southeast sink gillnet fisheries which overlap with the foraging range for this species. Additional human caused factors affecting Kemp's Ridelies include the impacts of boat traffic on turtles and coastal habitats, ingestion and entanglement in marine debris, and intake of turtles into cooling systems of coastal power plants.

9.1.2 Overview of Habitats and Ecosystems

Habitats

Under the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA) there is a formal framework in place for federally managed fisheries to evaluate and manage the impact of fisheries on habitat. Habitat conservation in the Greater Atlantic is driven by the requirements to identify and conserve Essential Fish Habitat (EFH) for all federally managed species. Additionally, Marine Protected Areas (MPAs) are also used as a tool to conserve important biodiversity hotspots and provide protection to spawning aggregations of important species for fisheries.

The MSFCMA defines EFH as the waters and substrate necessary for fish for spawning, breeding, feeding or growth to maturity. The waters are defined as the associated physical, chemical, and biological properties. Substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities. Adverse effect refers to “direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality and/or quantity of EFH.” (50 CFR 600.810(a)). EFH that merit special attention because of the importance of their ecological function, sensitivity to degradation, the level of stress that they are subject to, or the rarity of the habitat type are categorized as Habitat areas of particular concern (HAPCs).

The EFH mandate has provisions in place which require each Fisheries Management Plans (FMPs) to describe and identify Essential Fish Habitat (EFH) and the adverse effects on EFH. Based on these management councils can set Habitat protections (such as gear restrictions, area closures and effort reductions) on individual FMPs or across all FMPs. The NEFMC has used year-round area closures as a tool to minimize adverse effects from fishing on habitat. Current regulations in place to minimize the adverse effect of bottom trawls and dredges on EFH include (NEFMC 2011):

- gear restrictions, including the inshore Gulf of Maine roller gear restriction;
- establishment of habitat closed areas in the multispecies and scallop FMPs;
- establishment of groundfish mortality closed areas (with associated gear restrictions), which are assumed to provide incidental benefits to EFH; and
- reductions in area swept over time (via reductions in effort and/or increased use of rotational management that provides for the same or greater harvest with less area swept).

In 2016 the New England Fishery Management Council (NEFMC) published the Draft of the Omnibus Essential Fish Habitat Amendment 2 (OHA2). Prior to this amendment efforts to minimize adverse effects of NEFMC fisheries had been developed and implemented mostly for each FMPs individually. The amendment was developed to fulfil the essential fish habitat requirements of the MSFCMA and integrate habitat management measures across all NEFMC-managed fisheries. The principal objectives of the EFH Amendment are to review and revision of the EFH designations (Purpose A), identify habitats where adverse impacts should be minimized (Purpose B) and “identify other actions to encourage conservation and enhancement of such habitat” (Purpose C). The amendment also includes two purposes specific to groundfish management: “to improve protection for juvenile groundfish and their habitats” (Purpose D) and “to identify seasonal closed areas in the Northeast Multispecies FMP that would reduce impacts on spawning groundfish and on the spawning activity of key groundfish species” (Purpose E) (NEFMC 2016). Recognizing that “both temporary and year-round fishing area closures result in effort displacement if they are not accompanied by commensurate catch or effort controls (Rijnsdorp et al. 2001, Dinmore et al. 2003)” (NEFMC 2011).

Between fall 2007 and spring 2010 the NEFMC Habitat Plan Development Team (PDT) developed the Swept Area Seabed Impact (SASI) to support the development of the Omnibus EFH Amendment 2. The SASI approach is used to estimate the magnitude, location, and duration of adverse effects across gears types and FMPs in order to evaluate the cumulative impacts of alternatives to minimize adverse effects. The SASI approach consists of five components: (1) Vulnerability Assessment, (2) SASI Model, (3) Local Indicators of Spatial Association (LISA) Analysis, (4) Cost-efficiency Analysis, and (5) Area Closure Analysis.

The present fishery uses three gears, among which bottom trawl is assumed to have the highest potential habitat impact, though demersal longline and sink gillnets are known to have some impact, the areas most vulnerable to this impact are the same as those most vulnerable to trawl.

Habitat types for this region are defined by substrate type, geomorphology, and biota (see Table 16 below), which is helpful because that's how MSC requires habitats to be classified.

Table 16. Habitat classifications from NEFMC 2011.

	<u>High Energy</u>		<u>Low energy</u>	
	<u>Geological features (modify 50% of A)</u>	<u>Biological features (modify 50% of A)</u>	<u>Geological features (modify 50% of A)</u>	<u>Biological features (modify 50% of A)</u>
<u>Mud</u>	Biogenic burrows, biogenic depressions, sediments	Cerianthid burrowing anemones, hydroids, mussels, tube-dwelling amphipods	Biogenic burrows, biogenic depressions, sediments	Cerianthid burrowing anemones, sea pens, hydroids, mussels, tube-dwelling amphipods
<u>Sand</u>	Biogenic burrows, biogenic depressions, sediments, bedforms, shell deposits	Cerianthid burrowing anemones, tube- dwelling amphipods, ascidians, hydroids, <i>Filograna implexa</i> , sponges, mussels, scallops	Biogenic burrows, biogenic depressions, sediments, shell deposits	Cerianthid burrowing anemones, sea pens, tube-dwelling amphipods, ascidians, hydroids, <i>Filograna implexa</i> , sponges, mussels, scallops
<u>Granule- pebble</u>	Scattered granule- pebble, granule-pebble pavement, shell deposits	Actinarian anemones, cerianthid burrowing anemones, ascidians, brachiopods, bryozoans, hydroids, macroalgae, <i>Filograna implexa</i> , other tube- dwelling polychaetes, sponges, mussels, scallops	Scattered granule- pebble, shell deposits	Actinarian anemones, cerianthid burrowing anemones, ascidians, brachiopods, bryozoans, hydroids, <i>Filograna implexa</i> , other tube-dwelling polychaetes, sponges, mussels, scallops
<u>Cobble</u>	Scattered cobble, piled cobble, cobble pavement	Actinarian anemones, ascidians, brachiopods, bryozoans, hydroids, macroalgae, <i>Filograna implexa</i> , other tube- dwelling polychaetes, sponges, mussels	Scattered cobble, piled cobble	Actinarian anemones, ascidians, brachiopods, bryozoans, hydroids, <i>Filograna implexa</i> , other tube-dwelling polychaetes, sponges, mussels
<u>Boulder</u>	Scattered boulder, piled boulder	Actinarian anemones, ascidians, brachiopods, bryozoans, hydroids, macroalgae, <i>Filograna implexa</i> , other tube- dwelling polychaetes, sponges, scallops, mussels	Scattered boulder, piled boulder	Actinarian anemones, ascidians, brachiopods, bryozoans, hydroids, <i>Filograna implexa</i> , other tube-dwelling polychaetes, sponges, scallops, mussels

The vulnerability assessment reviewed relevant habitat impacts literature to Northeast U.S. to organize seabed features (e.g. sponges, biogenic burrows, bed forms, etc.) according to susceptibility (initial effect by single pass of fishing gear) and recovery values. A value of 10 years is selected as the potential

recovery times for the features incorporated in the SASI model, which may be an underestimate of the recovery for some features. To examine distribution of vulnerable seafloor habitats, seabed features were inferred to occur in particular combinations of seafloor substrate (mud, sand, granule-pebble, cobble or boulder) and seafloor energy (high or low). The susceptibility and recovery of each 'seabed feature-gear-substrate-energy' combination was scored on a 0-3 scale. According to the 2011 SASI report (NEFMC 2011), these vulnerable habitats represent ~20% of the distribution of areas assumed to be fishable by generic trawl gear. The summary of vulnerability assessment results pertaining to demersal otter trawl, longline and sink gillnets are excerpted from the SASI document below, together with the recovery and susceptibility score key.

The following series of figures show the average percent reduction in functional value of features and average recovery time in years. The results are summarized by gear type, feature class (geological or biological), substrate, and energy. Longlines and gillnets are grouped together due to equality of S/R scores. In all cases, the S and R scores are converted to percentages and years, respectively, and then the percentages and years for individual features are averaged, with all features weighted equally. Because the SASI model selects percentages and years randomly from the range of possible values according to the S or R score, the figures below are based on random values, as follows

R=0, years = 1
R=1, years = 1 to 2
R=2, years = 2 to 5
R=3, years = 5 to 10

S=0, % = 0 to 10
S=1, % = 10 to 25
S=2, % = 25 to 50
S=3, % = 50 to 100

The table below each figure summarizes the mean susceptibility and recovery scores according to substrate, energy, and feature class. Note that scales vary between gear types depending on the range of values in the data. Slight differences in figures between gear types where average S and R scores are the same reflect the random assignment of years and percentages within each R or S category.

Table 17 Summary of susceptibility and recovery scores for trawl gear. Source: NEFMC 2011

Table 33 – Summary of susceptibility and recovery scores for trawl gear.

Trawl					
Substrate	Energy	Average S Score		Average R Score	
		Geological	Biological	Geological	Biological
Mud	High	2.0	1.3	0.0	1.5
	Low	2.0	1.4	0.0	1.6
Sand	High	1.8	1.5	0.2	1.6
	Low	1.8	1.6	0.5	1.7
Granule-pebble	High	1.0	1.7	0.3	1.7
	Low	1.0	1.7	2.0	1.7
Cobble	High	1.7	1.6	1.0	1.6
	Low	2.0	1.7	1.5	1.7
Boulder	High	1.0	1.7	1.5	1.6
	Low	1.0	1.8	1.5	1.7

Table 18 Summary of susceptibility and recovery scores for longline and gillnet gears. Source: NEFMC 2011**Table 36 – Summary of susceptibility and recovery scores for longline and gillnet gears.**

Longline, Gillnet					
Substrate	Energy	Average S Score		Average R Score	
		Geological	Biological	Geological	Biological
Mud	High	0.3	0.8	0.0	0.8
	Low	0.3	0.8	0.0	0.6
Sand	High	0.4	0.6	0.0	0.9
	Low	0.5	0.7	0.0	0.8
Granule-pebble	High	0.0	0.8	0.0	1.2
	Low	0.0	0.8	0.0	1.2
Cobble	High	0.3	0.8	1.0	1.1
	Low	0.5	0.8	1.5	1.1
Boulder	High	0.0	0.9	1.5	1.2
	Low	0.0	0.9	1.5	1.2

The SASI model substrate data are assembled from two primary sources, the USSEABED dataset from the U.S. Geological Survey, and the University of Massachusetts Dartmouth School for Marine Science and Technology (SMAST) video survey. Information on effort and fishing effects is obtained from Vessel Trip Report (VTR) data and observer data.

The NEFMC PDT conducted a literature review looking at 97 studies on the impacts of fishing gear on habitats relevant to Northwest Atlantic fishing gears and substrate features. The PDT notes in the SASI report that only about half of the studies provided experimental before/after impact studies that could be used to assign susceptibility and recovery scores. The majority (>70) of the studies focused on generic trawls. However, one of the limitations of the available information is the lack of details on specific gear types. The NEFMC PDT noted that “Efforts to assess the vulnerability of fish habitats to impacts from fishing remain challenged by (1) a limited amount of information regarding the locations and types of bottom substrates and (2) a lack of clear understanding of specifically how fishing activities affect these substrates” (NEFMC 2011).

The SASI approach proposes “a method for assessing the trade-off between recovery in areas closed to fishing and additional adverse effects resulting from fishing in the open areas” and “the potential change in aggregate adverse effects from opening currently closed areas” (NEFMC 2011). Their findings are summarized below:

We find that for nearly all area and gear type combinations, opening existing closed areas to fishing is predicted to decrease aggregate adverse effects. For mobile bottom tending gears, which comprise nearly 99% of all adverse effects in our region, allowing fishing in almost any portion of the area closures on Georges Bank is estimated to substantially decrease total adverse effects from fishing. Closures in the Gulf of Maine appear to also decrease aggregate adverse effects, but the magnitude of these reductions is substantially smaller.

Using a complex model combining susceptibility, recovery, areas fished, habitat types, and others (the details of which can be found in the SASI document), “adverse effects” of different gear types over the entire modelled area were determined. The resulting simulated outputs for UoA gears are given in Figure 6. Please note the color scales are different ranges for the different gear types. For instance, the dark red color for adverse effects of trawling is about 3.5 times higher than the dark red color for the other two gear types.

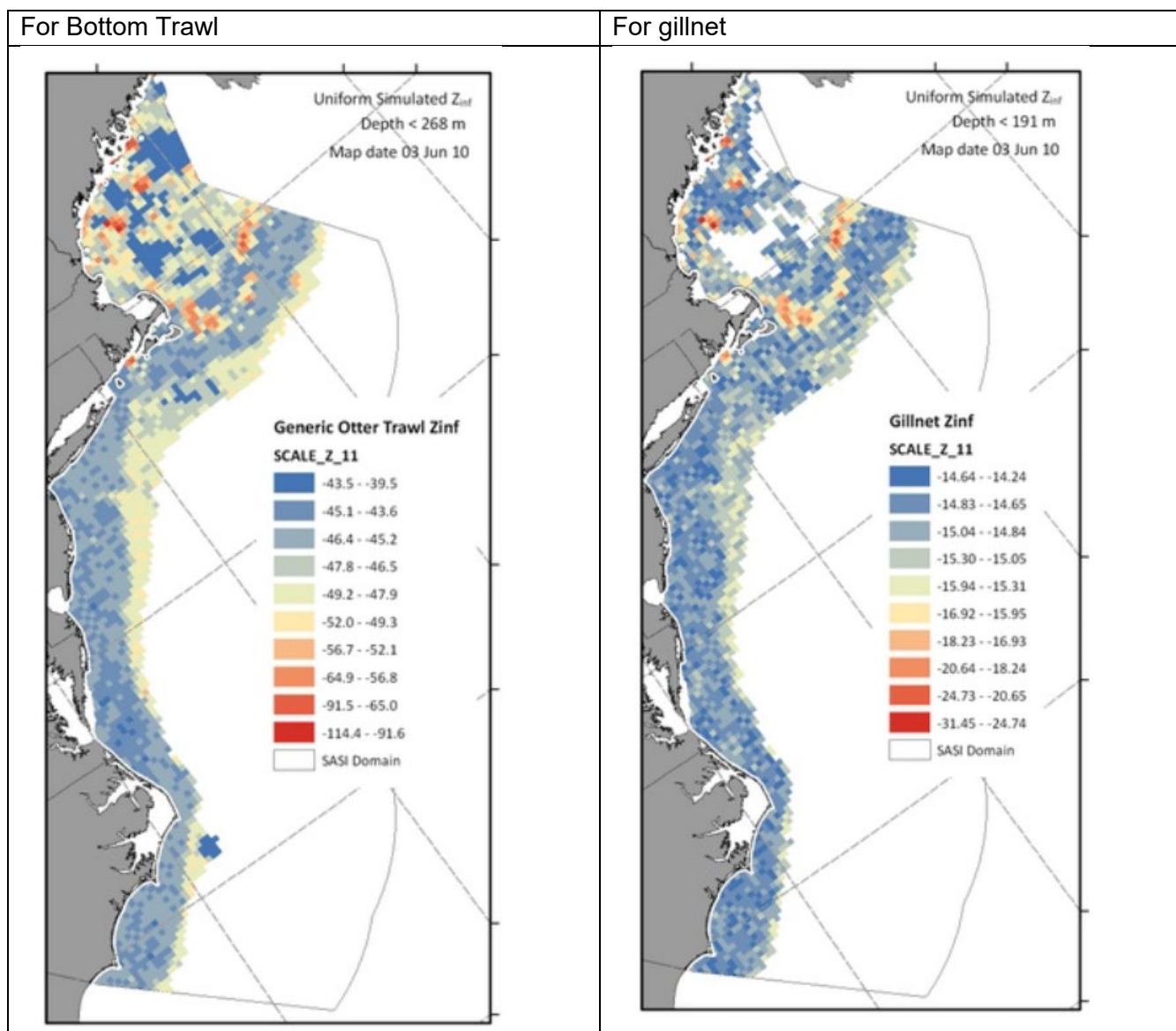


Figure 6. Simulated adverse effects of fishing for two UoA gear types, excerpted from NEFMC 2011, resulting from the SASI model.

The “realized” adverse effects based on actual area swept in the 2009 fishery for trawl gear can be seen in Figure 7. This can be compared with the simulated results in the left-hand panel in Figure 6.

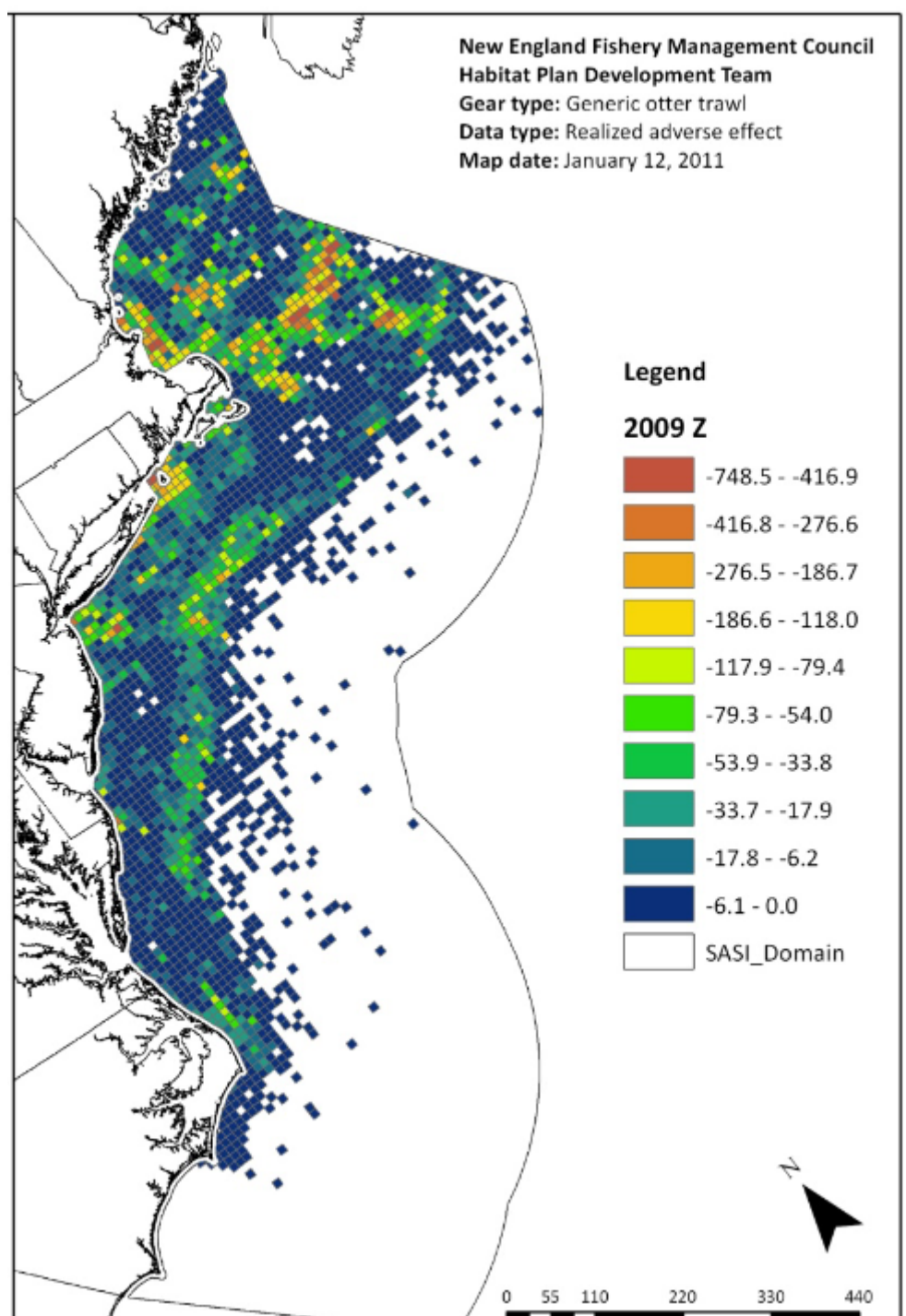


Figure 7. The “realized” adverse effects based on actual area swept in the 2009 fishery for trawl gear, excerpted from NEFMC 2011.

DeAlteris et al 2020 contains a comprehensive analysis of the definition of VME habitat in the MSC Standard in relation to habitat definitions such as EFH and Habitats of Particular Concern (HAPC) in the US managed fisheries parlance (in an SCS MSC assessment report). They determined that neither EFH nor HAPCs qualify as VME as defined by MSC, but deep-sea corals do. We concur with the analysis of the SCS team and thus have assigned deep sea corals as the only VME habitat relevant to the present fishery assessment. Deep sea coral protections exist where fishing by the trawl UoA, along with most types of bottom tending gear, is prohibited. In the 2017 update to the “State of Deep-Sea Coral and Sponge Ecosystems of the United States Report” (Hourigan et. al. 2017) it is stated that “annual number of interactions between fishing gear and deep-sea corals and sponges is not known, but bycatch data indicate that a relatively small number of trips interact with dep-sea corals.” Data as viewed through the Northeast

Ocean Data GIS mapping tool (<https://www.northeastoceandata.org/>) on skate distribution and deep-sea coral habitat suitability also provides evidence that the skate fishery generally would not take place over habitat areas suitable to deep sea corals. Lastly, an omnibus deep-sea coral amendment is currently in proposed rule stage within the NEFMC process. If the rule becomes law, the following deep-sea coral protection area will prohibit bottom fishing for all fisheries in the region “The Omnibus Deep-Sea Coral Amendment would establish deep-sea coral protection areas on the outer continental shelf in New England waters. It would complement the Frank R. Lautenberg Deep-Sea Coral Protection Area established by the Mid-Atlantic Fishery Management Council in Amendment 16 to the Atlantic Mackerel, Squid, and Butterfish FMP (81 FR 90246; December 14, 2016) as described in § 648.372. The area would run along the outer continental shelf in waters no shallower than 600 meters and extend to the outer limit of U.S. Exclusive Economic Zone (EEZ) boundary to the east and north, and south to the intercouncil boundary as described in § 600.105(a). The Council proposed this coral protection area to prevent the expansion of fishing effort into deep-water coral areas, while limiting impacts on current fishing operations (<https://s3.amazonaws.com/nefmc.org/2019-28424.pdf>)”

Ecosystems

The following description of the Northeast U.S. Continental Shelf LME is taken from SCS (2018):

The UoAs reside within the Northeast U.S. Continental Shelf Large Marine Ecosystem (NES LME), which spans the area from Cape Hatteras to the Gulf of Maine. LMEs are defined by four ecological criteria: bathymetry, hydrography, productivity, and trophically linked populations. It is by these characteristics that the ~260,000km² area known as the NES LME is defined and distinguished from adjacent ecosystems. The NES LME is further characterized into subunits by NEFSC, including Georges Bank, Gulf of Maine, Scotian Shelf, and Mid-Atlantic Bight.

The Northeast U.S. Continental Shelf Large Marine Ecosystem is a dynamic, highly productive, and intensively studied system providing a broad spectrum of ecosystem goods and services. This region supports some of the highest revenue fisheries in the U.S. The system historically underwent profound changes due to very heavy exploitation by distant-water and domestic fishing fleets. Further, the region is experiencing changes in climate and physical forcing that have contributed to large-scale alteration in ecosystem structure and function. Projections indicate continued future climate change related to both short and medium terms cyclic trends as well as noncyclic climate change. (MAFMC 2014)

Fisheries do not impact all of these criteria: bathymetry and hydrography are examples of key ecosystem characteristics that are not subject to material fishery impact. Productivity at the base of the food web is certainly related to fisheries, though whether dynamics are bottom-up or top down can vary by system. For instance, McCowan et al (2014) found that bottom-up and top-down effects vary consistently with past fishing pressure and oceanographic conditions; where bottom-up control predominates within productive, overfished regions and top-down in relatively unproductive and under-exploited areas. Trophically linked populations is the criteria most vulnerable to fishing impacts, and the assessment team considers this key ecosystem element to encompass a consideration of impacts of ecological community structure.

This assessment has focused on these two biological LME defining criteria as the key ecosystem elements vulnerable to fishery impacts in assessing ecosystem status relative to UoA impacts. Management and information evaluations will consider the extent to which management systems monitor and manage to also account for the broader range of ecosystem characteristics and dynamics that affect the ecosystem structure and function in fisheries management.

NOAA’s Integrated Ecosystem Assessment (IEA) program evaluates ecosystems in 5 regions where it is currently being implemented, including the Northeast. Information available is synthesized in the NEFSC Ecosystem Status Reports (ESR). The following text primarily draws from the most recent version of the NES LME Ecosystem Status Report available online at the time of the assessment.

Primary and Secondary Productivity:

There is no long-term trend in the abundance of phytoplankton, while there is evidence of a shift of the composition of the zooplankton community: “small copepods increased in abundance in the 1990s, but shifted to larger bodied copepod species around 2000 (Figure 4.3). There is evidence of a more recent shift, with smaller zooplankton becoming more abundant again over the last several years.”

Fish Communities:

The evaluation of fish communities has found dramatic increases over time in the small elasmobranch and pelagic fish components. In contrast, an initial decline and subsequent recovery is evident for the groundfish category, while other fish have remained stable or increased. These trends in groundfish are understood to be related to historic overfishing practices and the successful implementation of management measures to rebuild some groundfish species (Figure 7). A review of the ratio of pelagic to demersal species shows a relative decrease in demersal species in all regions except the Mid-Atlantic Bight in the 1970s and 80s, with trends levelling in the 1990s.

Biodiversity trends are evaluated using Hurlbert’s expected number of species which standardizes the sample size between tows. For the NES LME, trends in the expended number of species follow one of two patterns; expected numbers either increased during the middle of the time series with recent slight declines or vice versa (Figure 8).

In terms of fish size, Georges Bank has remained relatively stable with some evidence of a slight recent, the Gulf of Maine has had seen relatively continuous decline, and the Mid-Atlantic region showed initial declines followed by a stabilization at low mean size, with a recent increase in this area. Link et al (2012) found declines in several diversity indices in the groundfish community of the NES LME continental shelf. Studies have found varying results on compensatory dynamics within feeding guilds, but overall, in the NES LME, despite declines in species diversity it appears that functional diversity has been mostly preserved and that the compensatory process has functioned to replace commercial species that have declined to maintain the basic ecosystem functions of the NES LME food web (Link et al 2012). Mean trophic levels have been stable across most areas, with the exception of the Mid-Atlantic Bight which underwent a decline in the early 90s, followed by a rebound and another recent decline.

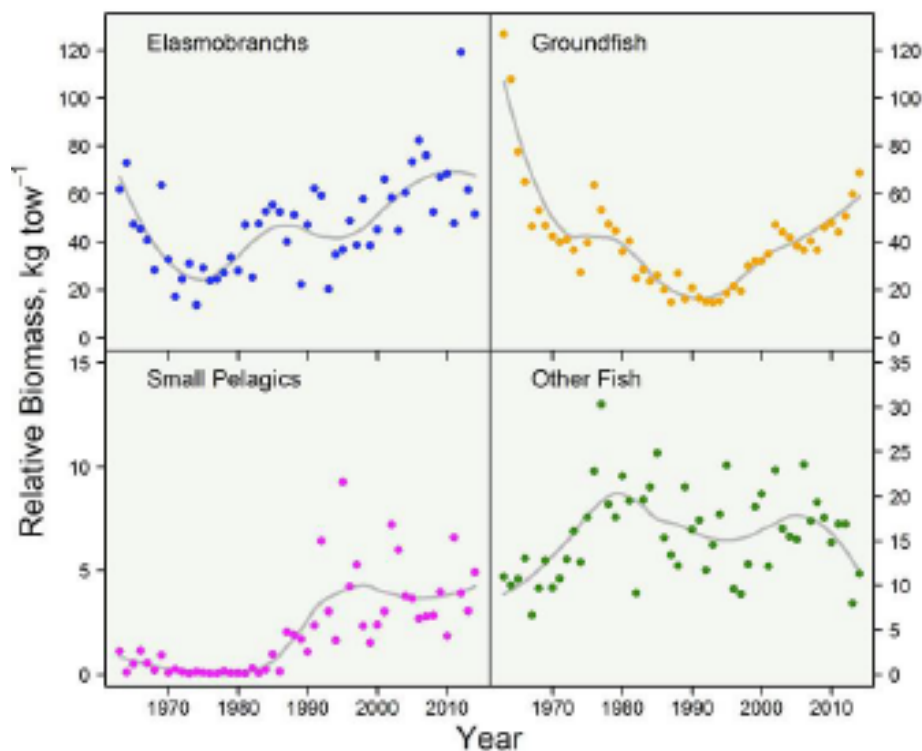


Figure 8. Survey indices (mean catch per tow) of aggregate species groups caught during NEFSC autumn bottom trawl surveys. From: <https://www.nefsc.noaa.gov/ecosys/ecosystem-status-report/fish-communities.html>

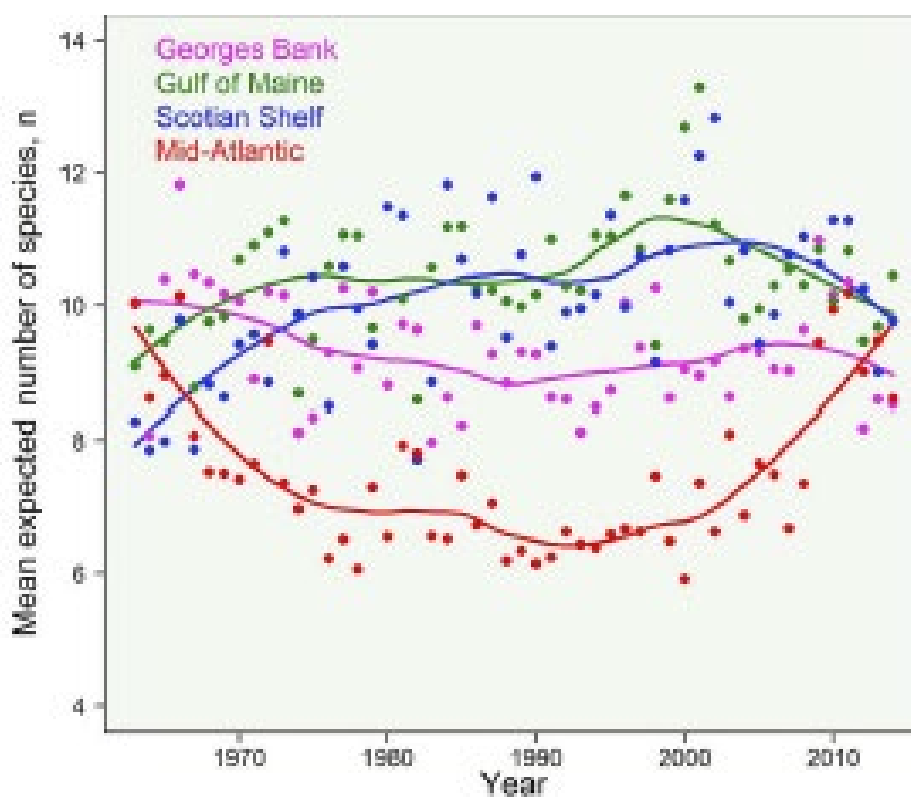


Figure 9. The mean expected number of species from the NEFSC autumn bottom trawl survey by ecological production units. Tows were standardized using 100 individuals. From: <https://www.nefsc.noaa.gov/ecosys/ecosystem-status-report/synthesis.html>.

While historical trend data provides evidence that fisheries can have a significant effect on the ecological community, this evidence also indicates that management has had success in rebuilding some stocks, suggesting that such overfishing impacts can be considered ‘reversible’. The ecosystem is also undergoing significant changes due to the changing ocean climate. There have been shifts in distribution and regional productivity largely attributed to climate change, including a southwestern movement in the Gulf of Maine and northeasterly movement across the coast as a whole. In addition to this movement, there has been notable shifts in depth distribution with species moving to deeper water due to warming waters.

The Ecosystem Status Report features a synthesis section that integrates climate, physical and ecological indicators that evaluates drivers and pressures related to these factors as well as management interventions and other factors, by 7 major species groups (Figure 9). There is a general overall positive trend, with a period pattern shows in the second composite score in red. The report notes that there are key fisheries management actions or changes that correspond with these periodic shifts. The report notes that data also indicates decadal ecosystem changes in the LME, that together with management interventions strongly affect fishery performance.

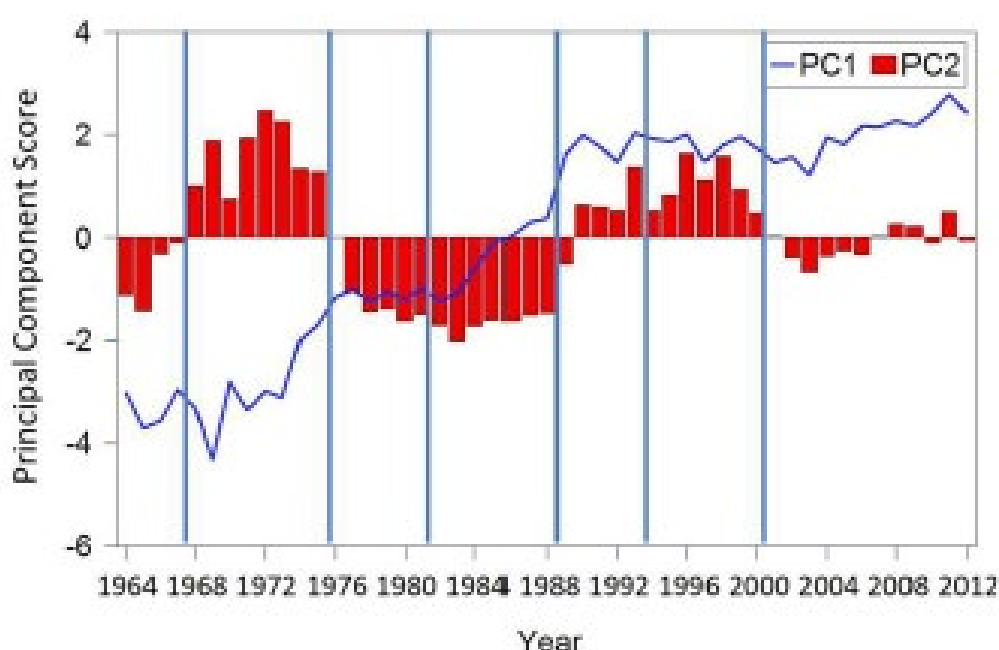


Figure 10. Composite fishery index values for the Northeast U.S. Continental Shelf Large Marine Ecosystem. The first composite index is shown in the blue line. The second composite index is shown in the red bars. The composite indices are based on landings data for species groups. Source: <https://www.nefsc.noaa.gov/ecosys/ecosystem-status-report/synthesis.html>.

According to the NEFSC Ecosystem Dynamics and Assessment Branch website, the importance of implementing marine Ecosystem-based Management in the United States has recently been highlighted with the adoption of a new National Ocean Policy, established under presidential order on July 19, 2010. This policy identifies nine objectives, the first of which establishes Ecosystem-based Management (EBM) as its guiding principle. The second priority highlights the importance of Coastal and Marine Spatial Planning as a tool for EBM.

The MAFMC articulated objectives for the living marine resources under its management authority in its Strategic Plan in 2011. Foremost among these objectives is the need to advance ecosystem approaches to fisheries management in the Mid-Atlantic. In June 2015, the Council convened a workshop with scientists and managers to discuss potential strategies to more fully consider species interactions and climate drivers in the stock assessment and management process (including determination of catch limits), and to build capacity within the region to conduct comprehensive management strategy evaluations (MSEs) as part of the Mid-Atlantic Council's Ecosystem Approach to Fisheries Management (EAFM). The workshop reviewed existing single species approaches as well as information and analytical tools available to address key

interactions between species and their environment, between species within the food web, and between the ecosystem and fisheries, and between fleets due to technical or management issues. A white paper has been produced as a step towards creating a plan to operationalize a decision-making process and framework for incorporating species, fleet, habitat, and climate interactions into fishery management. In addition to this document, the EAFM section of the Council website features a white paper on managing forage fishes, which would include managed and unmanaged species (Houde et al 2014).

In 2016, the Council approved a Guidance Document for an Ecosystem Approach to Fisheries Management. This document does not in and of itself operationalize any changes in management, but is rather considered a “how-to” guide, though it could be converted into a regulatory document in the future (MAFMC 2016), as a “new approach that involves all species and fisheries in a specific area, recognizes the energetic limits of the system, takes into account the trophic relationships among species, allows for greater adaptability to variability and change, and addresses multifaceted goals and objectives.” The NEFMC has taken as a first goal of EBFM the development of the Fishery Ecosystem Plan for Georges Bank, which will serve as an example for development of future plans and management measures. More information on the progress of these initiatives may be found in the NEFMC Ecosystem-Based Fishery Management Committee webpage.

Table 19. Scoring Elements

Component	Scoring elements	Designation	Data-deficient
e.g. P1, Primary, Secondary, ETP, Habitats, Ecosystems	e.g. species or stock (SA 3.1.1.1)	Main or Minor	
See Table 12 through Table 14 for Target, Primary and Secondary species scoring elements and their classification as main or minor. None have been determined to be data deficient but minor secondary species have not been assessed in the detail necessary to determine whether they are data deficient according to the MSC definition.			
See Table 16 for ETP species scoring elements. None have been determined to be data deficient. Seabirds are all classified as main secondary.			
Habitat	Sandy bottom with biological and geomorphological characteristics described in the habitats section above (including table excerpted from NEFMC 2011).	Commonly encountered	Not
Habitat	Muddy bottom with biological and geomorphological characteristics described in the habitats section above (including table excerpted from NEFMC 2011).	Commonly encountered	Not
Habitat	Granule-pebble bottom with biological and geomorphological characteristics described in the habitats section above (including table	Commonly encountered	Not

	excerpted from NEFMC 2011).		
Habitat	Deep sea corals	VME	Not
Ecosystem	Northeast US Continental Shelf Large Marine Ecosystem	Only	Not

9.2 Principle 2 Performance Indicator scores and rationales

PI 2.1.1 – Primary species outcome

PI 2.1.1		The UoA aims to maintain primary species above the point where recruitment would be impaired (PRI) and does not hinder recovery of primary species if they are below the PRI			
Scoring Issue		SG 60		SG 80	SG 100
a	Main primary species stock status				
	Guide post	Main primary species are likely to be above the PRI. OR If the species is below the PRI, the UoA has measures in place that are expected to ensure that the UoA does not hinder recovery and rebuilding.	Main primary species are highly likely to be above the PRI. OR If the species is below the PRI, there is either evidence of recovery or a demonstrably effective strategy in place between all MSC UoAs which categorise this species as main , to ensure that they collectively do not hinder recovery and rebuilding.	There is a high degree of certainty that main primary species are above the PRI and are fluctuating around a level consistent with MSY.	
		Met?	All-Yes		
	Rationale				

The status of these stocks has been evaluated in relation to performance against this scoring issue using the most recent stock assessments available for each. This information is summarized in Table 13. All three main primary species are assessed as above PRI with high likelihood, thus the SG80 is achieved. SG100 is not met due to uncertainty expressed in the respective stock assessments as well as their age, particularly for barndoor skate where the most recent assessment was in 2007.

b	Minor primary species stock status				
	Guide post			<p>Minor primary species are highly likely to be above the PRI.</p> <p>OR</p> <p>If below the PRI, there is evidence that the UoA does not hinder the recovery and rebuilding of minor primary species.</p>	

Met?			No
Rationale			

Dozens of minor species in both gear groups have been identified from the observer data (see Table 11 and Table 12). These have not been assessed in detail by the assessment team, hence the SG100 is not met.

References

Sosebee, Katherine and Paul Rago (2018) Update on the Status of Spiny Dogfish in 2018 and Projected Harvests at the Fmsy Proxy and pstar of 40%. Mid Atlantic Fishery Management Council, Scientific and Statistical Committee report. August 31, 2018.

NMFS. (2007). 44th SAW Stock Assessment Report. 44th Northeast Regional Stock Assessment Workshop (44th SAW). May 2007

Northeast Fisheries Science Center (2013). 2013 Monkfish Operational Assessment. August 2013. Accessed at: <https://repository.library.noaa.gov/view/noaa/4560>

Northeast Fisheries Science Center. (2017) Operational Assessment of 19 Northeast Groundfish Stocks, Updated through 2016. US Dept Commerce, Northeast Fish Science Center Ref Doc. 17-17; 259p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at <http://www.nefsc.noaa.gov/publications>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	80
Condition number (if relevant)	

PI 2.1.2 – Primary species management strategy

PI 2.1.2		There is a strategy in place that is designed to maintain or to not hinder rebuilding of primary species, and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch		
Scoring Issue		SG 60	SG 80	SG 100
a	Management strategy in place			
	Guide post	There are measures in place for the UoA, if necessary, that are expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are likely to be above the PRI.	There is a partial strategy in place for the UoA, if necessary, that is expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are highly likely to be above the PRI.	There is a strategy in place for the UoA for managing main and minor primary species.
	Met?	All-Yes	All-Yes	All-No
Rationale				

As described in detail above, each of the main primary species is managed under a Fishery Management Plan specific to that species or with other species/stocks within the same fishery. Each FMP lays out a cohesive set of management arrangements (strategy) for ensuring catches do not exceed allowable levels designed to maintain stocks at healthy levels. However, since we have not evaluated the management strategy for minor primary species in detail, the SG100 is not met.

Management strategy evaluation				
b	Guide post	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is some objective basis for confidence that the measures/partial strategy will work, based on some information directly about the fishery and/or species involved.	Testing supports high confidence that the partial strategy/strategy will work, based on information directly about the fishery and/or species involved.
	Met?	All-Yes	All-Yes	Barndoor skate-No All others-Yes
Rationale				

For all main primary species except barndoor skate, testing supports high confidence that management strategies contained within the FMPs are working to maintain stocks at acceptable levels and prevent overfishing from occurring. This evidence/testing is based on the ability to maintain these stocks above PRI with at least high likelihood using these management plans over the years. Barndoor skate is managed as part of the skate complex, and the most recent stock assessment is more than 10 years old. Significant uncertainty in stock status and reference points for this species (assessed using a survey index trend) was identified in the 2007 assessment, and the biomass proxy estimate at the time was only slightly (18%) higher than the threshold (PRI equivalent) value. Therefore, a lack of certainty about the current status of this stock prevents a score of 100 for this scoring element.

Management strategy implementation				
c	Guide post		There is some evidence that the measures/partial strategy is being implemented successfully .	There is clear evidence that the partial strategy/strategy is being implemented successfully and is achieving its overall objective as set out in scoring issue (a) .
	Met?		All-Yes	Barndoor skate-No All others-Yes
Rationale				

For all stocks except barndoor skate, there is clear evidence that the management strategies as defined in the respective FMPs are being implemented successfully in that the stocks have been maintained at acceptable levels and not subjected to overfishing. Observer program monitoring is reliable, and assessments and management measures are generally updated frequently to ensure this remains the case. For barndoor skate, as noted in the previous scoring issue, barndoor skate is managed as part of the skate complex, and the most recent stock assessment is more than 10 years old. Significant uncertainty in stock status and reference points for this species (assessed using a survey index trend) was identified in the 2007 assessment, and the biomass proxy estimate at the time was only slightly (18%) higher than the threshold (PRI equivalent) value. Therefore, a lack of certainty about the current status of this stock prevents a score of 100 for this scoring element relative to clear evidence that the strategy is achieving its overall objectives relative to maintaining stock status.

Shark finning				
d	Guide post	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	Both UoAs-Yes	Both UoAs-Yes	Both UoAs-Yes
Rationale				

There is a high degree of certainty that shark finning is not taking place in this fishery. A federal law (the Shark Finning Prohibition Act of 2000) prohibits shark finning, where the fins are removed, and the carcass is discarded. The law prohibits any person under U.S. jurisdiction from engaging in the finning of sharks, possessing shark fins aboard a fishing vessel without the corresponding carcass, and landing shark fins without the corresponding carcass. The Shark Finning Prohibition Act also requires NOAA Fisheries to provide Congress with an annual report describing efforts to implement the law. In addition, on January 4, 2011, the Shark Conservation Act of 2010 was signed into law, amending the High Seas Driftnet Fishing Moratorium Protection Act and the MSRA. The Shark Conservation Act requires that all sharks in the United States, with one exception (commercial fisheries for smooth dogfish), be brought to shore with their fins naturally attached. Moreover, several states have shark fin laws that prohibit the possession and/or retention of shark fins (even if they are legally landed under the requirements of the Shark Conservation Act).

In addition, including pelagic shark species in the Highly Migratory Species FMP enables catches to be monitored and managed. The FMP also designates great white, megamouth, and basking sharks as prohibited species, meaning if these species are caught, they may not be retained. This discourages

intentional catch and, in cases where the shark survives the interaction, reduces fishing mortality. There is no evidence in observer reports of the three prohibited species mentioned above occurring in the catch of this fishery and an acceptable level of observer coverage monitoring of catches and discards and a high level of dockside monitoring comprise comprehensive external validation that shark finning is not taking place within this fleet.

Review of alternative measures				
e	Guide post	There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main primary species.	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main primary species and they are implemented as appropriate.	There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of all primary species, and they are implemented, as appropriate.
	Met?	Yes	Yes	No
Rationale				

The US National Bycatch Reduction Strategy Implementation Plan 2020-2024 (NOAA Fisheries 2020) is the latest operationalization of the National Bycatch Reduction strategy (NOAA Fisheries 2016), finalized by NOAA Fisheries in 2016. The goal of the 2016 National Bycatch Reduction Strategy is to guide and coordinate NOAA Fisheries' efforts to reduce bycatch and bycatch mortality in support of sustainably managing fisheries and recovering and conserving protected species. The implementation of the strategy occurs at regional, national, and international levels, and includes several short-, medium- and long-term actions designed to achieve the objectives of the strategy. There are also a number of continuous actions within the strategy, that reflect ongoing efforts such as the Bycatch Reduction Engineering Program (BREP). The SG80 is met. The SG100 is not met because within this strategy, the UoA fisheries are not likely to be reviewed biennially.

References

Benaka, L.R., D. Bullock, A.L. Hoover, and N.A. Olsen (editors) (2019) U.S. National Bycatch Report First Edition Update 3. 2019. U.S. Dept. of Commerce, NOAA. NOAA Technical Memorandum NMFS-F/SPO-190, 95 p.

United States of America (2000, 2011), NMFS (2019, 2016, 2014, 2011) (National Bycatch Report)

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	90
Condition number (if relevant)	

PI 2.1.3 – Primary species information

PI 2.1.3		Information on the nature and extent of primary species is adequate to determine the risk posed by the UoA and the effectiveness of the strategy to manage primary species		
Scoring Issue		SG 60	SG 80	SG 100
a	Information adequacy for assessment of impact on main primary species			
	Guide post	Qualitative information is adequate to estimate the impact of the UoA on the main primary species with respect to status. OR If RBF is used to score PI 2.1.1 for the UoA: Qualitative information is adequate to estimate productivity and susceptibility attributes for main primary species.	Some quantitative information is available and is adequate to assess the impact of the UoA on the main primary species with respect to status. OR If RBF is used to score PI 2.1.1 for the UoA: Some quantitative information is adequate to assess productivity and susceptibility attributes for main primary species.	Quantitative information is available and is adequate to assess with a high degree of certainty the impact of the UoA on main primary species with respect to status.
	Met?	All-Yes	All-Yes	Barndoor skate-No Spiny dogfish-Yes Monkfish-No
Rationale				

Primary species are defined primarily based on the quantitative information available to assess them (and the existence of an FMP; see background section). For all main Primary species, the SG80 is met, as their status is known with respect to biologically based limits, and UoA catches are monitored and all landings are recorded on Vessel Trip Reports. For spiny dogfish the SG100 is also met because, although there is uncertainty in the stock assessment, the assessment is recent and forms the basis for allowable catches to ensure the annual catch limits are not exceeded.

Information adequacy for assessment of impact on minor primary species				
b	Guide post			Some quantitative information is adequate to estimate the impact of the UoA on minor primary species with respect to status.
	Met?			No
Rationale				

Minor species have not been assessed, hence the SG100 is not met.

Information adequacy for management strategy				
C	Guide post	Information is adequate to support measures to manage main primary species.	Information is adequate to support a partial strategy to manage main primary species.	Information is adequate to support a strategy to manage all primary species, and evaluate with a high degree of certainty whether the strategy is achieving its objective.
	Met?	All-Yes	All-Yes	All-No
Rationale				

As mentioned previously, main primary species in this assessment are each managed with an FMP, and stock assessments are conducted using fishery-dependent and independent data which inform total allowable catches and landings, which in turn are adequately monitored and reported. This means information is adequate to support at least a partial strategy to manage the three main primary species. The SG100 is not met because minor primary species have not been assessed.

References

Sosebee, Katherine and Paul Rago (2018) Update on the Status of Spiny Dogfish in 2018 and Projected Harvests at the Fmsy Proxy and pstar of 40%. Mid Atlantic Fishery Management Council, Scientific and Statistical Committee report. August 31, 2018.

NMFS. (2007). 44th SAW Stock Assessment Report. 44th Northeast Regional Stock Assessment Workshop (44th SAW). May 2007

Northeast Fisheries Science Center (2013). 2013 Monkfish Operational Assessment. August 2013. Accessed at: <https://repository.library.noaa.gov/view/noaa/4560>

Northeast Fisheries Science Center. (2017) Operational Assessment of 19 Northeast Groundfish Stocks, Updated through 2016. US Dept Commerce, Northeast Fish Science Center Ref Doc. 17-17; 259p. Available from: National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543-1026, or online at <http://www.nefsc.noaa.gov/publications>

NMFS Observer Program Data. G Shield (personal communication, September 25, 2020)

[Draft scoring range and information gap indicator added at Announcement Comment Draft Report](#)

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	

PI 2.2.1 – Secondary species outcome

PI 2.2.1		The UoA aims to maintain secondary species above a biologically based limit and does not hinder recovery of secondary species if they are below a biological based limit		
Scoring Issue		SG 60	SG 80	SG 100
a	Main secondary species stock status			
	Guide post	<p>Main secondary species are likely to be above biologically based limits.</p> <p>OR</p> <p>If below biologically based limits, there are measures in place expected to ensure that the UoA does not hinder recovery and rebuilding.</p>	<p>Main secondary species are highly likely to be above biologically based limits.</p> <p>OR</p> <p>If below biologically based limits, there is either evidence of recovery or a demonstrably effective partial strategy in place such that the UoA does not hinder recovery and rebuilding.</p> <p>AND</p> <p>Where catches of a main secondary species outside of biological limits are considerable, there is either evidence of recovery or a, demonstrably effective strategy in place between those MSC UoAs that have considerable catches of the species, to ensure that they collectively do not hinder recovery and rebuilding.</p>	There is a high degree of certainty that main secondary species are above biologically based limits.
	Met?	All seabirds-Yes	All seabirds-Yes	Greater shearwater-Yes Northern fulmar-Yes Common loon-Yes Thin-billed loon-Yes Common eider-No Manx shearwater-No Herring gull-No Sooty shearwater-No White-winged scoter-No

				Black scoter-No
Rationale				

Fourteen seabird species have been classified as secondary main, as they are known to interact with the fishery and they are not classified as Endangered, Threatened, or Protected. Table 14 lists these species, together with observed interactions over the period from 2015-2019; an estimate of total mortality from the fishery based on observer coverage rates; and their population trends, if known. The **greater shearwater** (*Puffinus gravis*) is by far the seabird with the most recorded and estimated interactions with the gillnet fisheries, accounting for more than half of all seabird bycatch in the greater Atlantic region (Benaka et. al. 2019). Its population is estimated as stable at around 15 million individuals and is classified as “least concern” on the IUCN red list because of its extremely large range, and stable and large population size. Thus, it is highly likely that this population is above biologically based limits and the SG80 is met.

Of the remaining species, the population sizes of **northern fulmar** (*Fulmarus glacialis*), **common loon** (*Gavia immer*) and **thin-billed (common) murre** (*Uria aalge*) are either stable or improving, and all are “least concern” on the IUCN red list. Catches of these species in these fisheries under assessment are likely in the single digits annually. Thus, the SG100 is also met for these species, as there is also a high degree of certainty with large, stable or increasing populations and least-concern classification by the IUCN, to be above biologically based limits.

Population trends for common eider (*Somateria mollissima*), and Manx shearwater (*Puffinus puffinus*) are unknown. **Common eider** has a population size of 3.1-3.8 million globally and is near threatened on the IUCN red list, though this is due to decreases in population in Europe (overfishing is listed as one of the threats), thought to be compensated for at least partly by increases elsewhere in the world. An average of 1.2 common eiders annually have been observed as taken in these fisheries over the past 5 years, and total average annual take is estimated at roughly 10 individuals. Therefore, although it is not necessarily highly likely that these birds are above biologically based limits, the low incidence of interactions with these fisheries means they are highly unlikely to be hindering recovery and the SG80 is met. **Manx shearwater** has an extremely large range and a population size of between 680,000 and 790,000 individuals globally. It is evaluated as least-concern on the IUCN red list due to its large range and population size. Though the population trend is unknown, it is not thought to be declining at a rate necessary to consider reclassification as near threatened. These UoAs have had one observed interaction with Manx shearwater over the past 5 years and based on this, they are estimated to take less than 5 annually. Thus, the SG80 is met on the basis that these UoAs are highly unlikely to be impacting the population size in any meaningful way.

Populations of sooty shearwater (*Puffinus griseus*), white-winged scoter (*Melanitta deglandi*), black scoter (*Melanitta nigra*), Cory’s shearwater (*Puffinus Diomedea*), and herring gull (*Larus argentatus*) are all thought to be decreasing across their ranges. All are observed in very small numbers in the UoA fisheries. **Herring gull** has a global population of 1.37-1.62 million individuals and IUCN Red List “least concern”. Although the population trend appears to be decreasing, the decline is currently thought to be part of a longer-term fluctuation following previous increases. Its range is throughout northern Europe, so interaction with a fishery in the western Atlantic seems unusual. There was only one interaction recorded in 2015 over the five most recent fishing years. It is extremely unlikely that this fishery would be hindering any recovery or that recovery is necessary for this species. The SG80 is met. **Sooty shearwater** has a global population of roughly 20 million individuals. This species is classified as Near Threatened on the IUCN red list because it is thought to have undergone a moderately rapid decline owing to the impact of fisheries, the harvesting of its young for traditional purposes in New Zealand (trapping and killing an estimated 250 thousand birds per year) and possibly climate change. According to Sigourney et. al. (2019), there were approximately 7-12 sooty shearwaters killed in skate gillnet fisheries each year in 2015 and 2016. It is thus highly unlikely that these fisheries are hindering the recovery of this species and the SG80 is met. The population size of **white-winged scoter** is unknown. Although it is thought to be declining, the rate of decline is not sufficiently rapid to approach the thresholds for vulnerable under the IUCN population trend criterion. The distribution of this species extends along both the Pacific and Atlantic US and Canadian coasts of North America and they breed in north-western Canada and Alaska, where there is subsistence harvest and sport take of birds from breeding colonies (also for black scoters) According to Koneff et. al

(2017) white-winged scoters are at moderate risk of overharvest (direct take for subsistence or sport) and estimated an “allowable harvest” level of 13,068 birds. The average annual mortality for this species from the Northeast gillnet fishery is likely around 17 individuals. The take of these birds in this fishery is highly unlikely to hinder any recovery or rebuilding that may be necessary for the population at these low levels of mortality. The SG80 is met. Koneff et. al. (2017) also included eastern and western **black scoter** in their analysis of harvest and information needs for North American sea ducks. They evaluated eastern black scoter as lowest risk of overharvest with an estimated allowable harvest of 39,062 individuals. This species is listed as near threatened on the IUCN red list and has a global population of 530,000-830,000 individuals. Black scoters are subject to a combination of threats and ongoing impacts. These include contaminants in the food chain, subsistence harvest, sport harvest, and habitat disturbance and fragmentation, including large-scale habitat disturbance from resource-extraction industries in the Bering Sea of Alaska and in north-central Canada, and hydrologic projects in northern Quebec (Sea Duck Joint Venture 2016). Hunting accounts for roughly 15,000 black scoter mortalities annually. The northeast gillnet fishery likely takes roughly 13 individuals annually and is thus highly unlikely to hinder any recovery or rebuilding that may be necessary for the population at these low levels of mortality. The SG80 is met.

Minor secondary species stock status				
b	Guide post			Minor secondary species are highly likely to be above biologically based limits. OR If below biologically based limits', there is evidence that the UoA does not hinder the recovery and rebuilding of secondary species
	Met?			No
Rationale				

Minor secondary species have not been assessed, hence the SG100 is not met.

References

Benaka, L.R., D. Bullock, A.L. Hoover, and N.A. Olsen (editors). U.S. National Bycatch Report First Edition Update 3. 2019. U.S. Dept. of Commerce, NOAA. NOAA Technical Memorandum NMFS-F/SPO-190, 95 p

Koneff, Mark D., Zimmerman, Guthrie S., Dwyer, Chris P., Fleming, Kathleen K., Padding, Paul I., Devers, Patrick K., Johnson, Fred A., Runge, Michael C., and Roberts, Anthony J. (2017). Evaluation of harvest and information needs for North American sea ducks. PLOS ONE April 18, 2017

Sea Duck Joint Venture (2016) Black Scoter (*melanitta americana*). Sea Duck Information Series. Info sheet #2 of 15. July 2016. Seaduckjv.org

<http://datazone.birdlife.org/species/factsheet/sooty-shearwater-ardenna-grisea>
<http://datazone.birdlife.org/species/factsheet/white-winged-scoter-melanitta-deglandi>
<http://datazone.birdlife.org/species/factsheet/black-scoter-melanitta-americana>
<http://datazone.birdlife.org/species/factsheet/common-eider-somateria-mollissima>

<http://datazone.birdlife.org/species/factsheet/common-murre-uria-aalge>
<http://datazone.birdlife.org/species/factsheet/scopolis-shearwater-calonectris-diomedea/details>
<http://datazone.birdlife.org/species/factsheet/22698226>
<http://datazone.birdlife.org/species/factsheet/european-herring-gull-larus-argentatus>

Report produced for Northeast skate by the Seabird Information for Fisheries Assessment Tool.
 American Bird Conservancy. www.fisheryandseabird.info Produced on September 25, 2020

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	

PI 2.2.2 – Secondary species management strategy

PI 2.2.2		There is a strategy in place for managing secondary species that is designed to maintain or to not hinder rebuilding of secondary species and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch		
Scoring Issue		SG 60	SG 80	SG 100
a	Management strategy in place			
	Guide post	There are measures in place, if necessary, which are expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be above biologically based limits or to ensure that the UoA does not hinder their recovery.	There is a partial strategy in place, if necessary, for the UoA that is expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be above biologically based limits or to ensure that the UoA does not hinder their recovery.	There is a strategy in place for the UoA for managing main and minor secondary species.
	Met?	All seabirds, both UoAs-Yes	All seabirds, both UoAs-Yes	All seabirds, both UoAs-No
Rationale				

Migratory bird conventions impose substantive obligations on the United States for the conservation of migratory birds and their habitats, and through the Migratory Bird Treaty Act (Act), the United States has implemented these migratory bird conventions with respect to the United States. Executive Order 13186 (2012) directs executive departments and agencies to take certain actions to further implement the Act. Relevant to NOAA and NOAA fisheries, this executive order includes the following directions:

...identify where unintentional take reasonably attributable to agency actions is having, or is likely to have, a measurable negative effect on migratory bird populations, focusing first on species of concern, priority habitats, and key risk factors. With respect to those actions so identified, the agency shall develop and use principles, standards, and practices that will lessen the amount of unintentional take, developing any such conservation efforts in cooperation with the Service. These principles, standards, and practices shall be regularly evaluated and revised to ensure that they are effective in lessening the detrimental effect of agency actions on migratory bird populations. The agency also shall inventory and monitor bird habitat and populations within the agency's capabilities and authorities to the extent feasible to facilitate decisions about the need for, and effectiveness of, conservation efforts;

To this end, the National Seabird Program within NOAA fisheries has been developed. Under this program there are several national and regional initiatives designed to mitigate the impacts of fisheries on seabird populations from both direct mortality and habitat destruction/disruption. While the initiatives under this program are certainly cohesive enough as a whole to comprise a full strategy for managing impacts to seabird species, in the northeast region, the current focus is on longline fisheries because there is a greater risk of those fisheries adversely impacting seabird populations (their interactions with seabirds are one or more orders of magnitude higher than sink gillnets or bottom trawls), rather than gillnets or trawls, which are the gears used in the present UoAs.

According to MSC: A “partial strategy” represents a cohesive arrangement which may comprise one or more measures, an understanding of how it/they work to achieve an outcome and an awareness of the

need to change the measures should they cease to be effective. It may not have been designed to manage the impact on that component specifically.

The MSC's guidance on this scoring issue clarifies that the measures/partial strategies/strategies *relate to the management undertaken by the UoA*. In this case, the UoA management system for little and winter skate covers all gear types and fisheries in the New England region, and in this sense, the strategy described above does relate to the management undertaken by the UoA though it does not have a strong focus on gillnet or trawl fisheries currently.

Moreover, as described under 2.2.1, interactions with all main seabird species are sufficiently limited for both gillnets and bottom trawl so as to allow confidence that the UoAs are maintaining or not hindering rebuilding of any of these birds simply by continuing their current fishing practices with these gear types. This combination of evidence is sufficient to determine that there is a partial strategy in place, if necessary, for the UoA that is expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be above biologically based limits.

Therefore, the SG80 is met for this PI, but not the SG100, given the current lack of focus within the strategy on seabird mitigation in gillnet and trawl fisheries, specifically.

Management strategy evaluation				
b	Guide post	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar UoAs/species).	There is some objective basis for confidence that the measures/partial strategy will work, based on some information directly about the UoA and/or species involved.	Testing supports high confidence that the partial strategy/strategy will work, based on information directly about the UoA and/or species involved.
	Met?	All seabirds-Yes	All seabirds-Yes	All seabirds-No
Rationale				

There is some objective basis for confidence that the partial strategy as described in the National Seabird Program for ensuring US fisheries work toward minimization of adverse impacts to seabirds is working. This is evidenced through operationalization of regional implementation plans and progress reports. Specifically, for the gillnet and trawl UoAs under assessment, there has been an overall stable and relatively low level of seabird bycatch over the past 5 years, and no species with recent recorded interactions are endangered or threatened. Thus, there is some information directly about the UoA and species involved to support this objective basis for confidence and the SG80 is met. There is insufficient evidence of testing to support high confidence of the above, thus the SG100 is not met.

Management strategy implementation				
c	Guide post		There is some evidence that the measures/partial strategy is being implemented successfully .	There is clear evidence that the partial strategy/strategy is being implemented successfully and is achieving its objective as set out in scoring issue (a) .
	Met?		All seabirds, both UoAs-Yes	All seabirds, both UoAs-No

Rationale

Some evidence exists to demonstrate the successful implementation of the National Seabird Program, and National Bycatch Reduction Strategy with respect to seabird bycatch in US fisheries. Specifically, for the northeast sink gillnet fishery, relatively low and stable levels of interactions with non-ETP seabirds provides this evidence, but this has also meant that the seabird bycatch reduction priorities have been elsewhere within the northeast region. However, actions within the current implementation plan for the NBRS includes greater attention on seabird bycatch reduction in gears other than longline (including gillnet and trawls). The SG80 is met, however the SG100 is not met due to the lack of clear focus within the seabird bycatch reduction strategy thus far on gillnets.

The northeast bottom trawl fishery has negligible interaction with seabirds.

Shark finning				
d	Guide post	It is likely that shark finning is not taking place.	It is highly likely that shark finning is not taking place.	There is a high degree of certainty that shark finning is not taking place.
	Met?	Both UoAs-Yes	Both UoAs-Yes	Both UoAs-Yes
Rationale				

There is a high degree of certainty that shark finning is not taking place in this fishery. A federal law (the Shark Finning Prohibition Act of 2000) prohibits shark finning, where the fins are removed, and the carcass is discarded. The law prohibits any person under U.S. jurisdiction from engaging in the finning of sharks, possessing shark fins aboard a fishing vessel without the corresponding carcass, and landing shark fins without the corresponding carcass. The Shark Finning Prohibition Act (SFPA 2000) also requires NOAA Fisheries to provide Congress with an annual report describing efforts to implement the law. In addition, on January 4, 2011, the Shark Conservation Act of 2010 was signed into law, amending the High Seas Driftnet Fishing Moratorium Protection Act and the MSRA (NOAA 2010). The Shark Conservation Act requires that all sharks in the United States, with one exception (commercial fisheries for smooth dogfish), be brought to shore with their fins naturally attached. Moreover, several states have shark fin laws that prohibit the possession and/or retention of shark fins (even if they are legally landed under the requirements of the Shark Conservation Act).

In addition, including pelagic shark species in the Highly Migratory Species FMP enables catches to be monitored and managed. The FMP also designates great white, megamouth, and basking sharks as prohibited species, meaning if these species are caught, they may not be retained. This discourages intentional catch and, in cases where the shark survives the interaction, reduces fishing mortality. There is no evidence in observer reports of the three prohibited species mentioned above occurring in the catch of this fishery and the high level of observer coverage monitoring of catches and discards and a high level of dockside monitoring comprise comprehensive external validation that shark finning is not taking place within this fleet.

Review of alternative measures to minimise mortality of unwanted catch				
e	Guide post	There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main	There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of all

		catch of main secondary species.	secondary species and they are implemented as appropriate.	secondary species, and they are implemented, as appropriate.
	Met?	Yes	Yes	No
Rationale				

The US National Bycatch Reduction Strategy Implementation Plan 2020-2024 (NOAA Fisheries 2020) is the latest operationalization of the National Bycatch Reduction strategy (NOAA Fisheries 2016), finalized by NOAA Fisheries in 2016. The goal of the 2016 National Bycatch Reduction Strategy is to guide and coordinate NOAA Fisheries' efforts to reduce bycatch and bycatch mortality in support of sustainably managing fisheries and recovering and conserving protected species. The implementation of the strategy occurs at regional, national, and international levels, and includes a number of short-, medium- and long-term actions designed to achieve the objectives of the strategy. There are also a number of continuous actions within the strategy, that reflect ongoing efforts such as the Bycatch Reduction Engineering Program (BREP).

Pertaining specifically to seabirds in the Northeast region, ongoing actions include evaluating models for estimating post-release and cryptic mortality of protected species including seabirds and including such estimates in stock assessment reports; and updating the NPOA Seabirds to include fishing gear other than longline in its scope, including gillnet and trawl.

The objective of the BREP is to support the development of technological solutions and changes in fishing practices designed to minimize bycatch of fish and protected species (including seabirds). Current priorities in the Northeast region are aimed at reduction of whale entanglements in the pot/trap fisheries through investigation of ropeless gear and improving post-release mortality of shortfin mako sharks in all gears. In addition, a grant has recently been let to do collaborative research with a German institution on reaction of small cetaceans to an acoustically enhanced gillnet, and its application to reduce their bycatch. The last time seabird bycatch in gillnet fisheries was specifically examined was in 2015, where studies into the usefulness of deploying LED lights on gillnets was explored in its ability to reduce seabird and turtle bycatch (NOAA Fisheries 2016b). These studies have continued into testing/trial phase the North Carolina gillnet fisheries through 2019, where preliminary results show that net illumination does not change target catch rates and may decrease the bycatch of unwanted fish species (as well as birds and turtles). Thus far, there has not been any implementation of this alternative measure, most likely because the test fishery work is not finished, and as mentioned earlier, there are other fisheries in which bycatch mitigation is considered a higher priority.

There is clearly an ongoing program in which regular review of effectiveness and practicality of alternative measures to reduce bycatch of secondary species, including seabirds, as evidenced through the BREP and National Bycatch Reduction Strategy and its most recent implementation plan. The SG80 is met. However, the SG100 is not met because these operational plans and strategies do not comprise a biennial review, because bycatch in gillnets (particularly seabird bycatch) is not always a high priority within this strategy, and thus gets periodic attention depending on other priority areas for research.

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Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	

PI 2.2.3 – Secondary species information

PI 2.2.3		Information on the nature and amount of secondary species taken is adequate to determine the risk posed by the UoA and the effectiveness of the strategy to manage secondary species		
Scoring Issue		SG 60	SG 80	SG 100
a	Information adequacy for assessment of impacts on main secondary species			
	Guide post	Qualitative information is adequate to estimate the impact of the UoA on the main secondary species with respect to status. OR If RBF is used to score PI 2.2.1 for the UoA: Qualitative information is adequate to estimate productivity and susceptibility attributes for main secondary species.	Some quantitative information is available and adequate to assess the impact of the UoA on main secondary species with respect to status. OR If RBF is used to score PI 2.2.1 for the UoA: Some quantitative information is adequate to assess productivity and susceptibility attributes for main secondary species.	Quantitative information is available and adequate to assess with a high degree of certainty the impact of the UoA on main secondary species with respect to status.
	Met?	All seabirds-Yes	All seabirds-Yes	Greater shearwater-Yes Northern fulmar-Yes Common loon-Yes Thin-billed (common) murre-Yes Common eider-No Manx shearwater-No Sooty shearwater-Yes White-winged scoter-Yes Black scoter-Yes Herring gull-Yes
Rationale				

Quantitative information is available and adequate to assess with a high degree of certainty the impact of the northeast sink gillnet and northeast bottom trawl UoAs on most seabirds with which it interacts, with respect to status. This information consists of estimates of seabird population sizes and trends, indications of major threats and their magnitudes, and the estimated mortalities from the two UoA fisheries. Only the population sizes and trends for common eider and Manx shearwater are unknown, and though the numbers of mortalities from these UoAs are quite small, it is still not possible to say with a high degree of certainty the impact of these UoAs, thus the SG100 is not met for these two species.

b Information adequacy for assessment of impacts on minor secondary species

	Guide post			Some quantitative information is adequate to estimate the impact of the UoA on minor secondary species with respect to status.
	Met?			No
Rationale				

Minor secondary species have not been assessed, hence the SG100 is not met.

Information adequacy for management strategy				
c	Guide post	Information is adequate to support measures to manage main secondary species.	Information is adequate to support a partial strategy to manage main secondary species.	Information is adequate to support a strategy to manage all secondary species, and evaluate with a high degree of certainty whether the strategy is achieving its objective .
	Met?	All seabirds and both UoAs-Yes	All seabirds and both UoAs-Yes	All seabirds and both UoAs-No
Rationale				

Information is adequate to support the strategy/partial strategy to manage impacts to main secondary species (seabirds). The partial strategy and its objectives and implementation have been described in the previous Performance Indicator. The information needed to support this strategy consists of population trend and status information for impacted seabirds, which exists to a sufficient degree for all of the populations in question here, as well as information about mortalities from the UoA fisheries. The latter information exists from observer reports. The SG80 is met for all species and both UoAs, however the SG100 is not met, *ipso facto*, because minor species have not been evaluated.

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Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	

PI 2.3.1 – ETP species outcome

PI 2.3.1		The UoA meets national and international requirements for the protection of ETP species The UoA does not hinder recovery of ETP species		
Scoring Issue		SG 60	SG 80	SG 100
a	Effects of the UoA on population/stock within national or international limits, where applicable			
	Guide post	Where national and/or international requirements set limits for ETP species, the effects of the UoA on the population/ stock are known and likely to be within these limits.	Where national and/or international requirements set limits for ETP species, the combined effects of the MSC UoAs on the population /stock are known and highly likely to be within these limits.	Where national and/or international requirements set limits for ETP species, there is a high degree of certainty that the combined effects of the MSC UoAs are within these limits.
	Met?	All mammals-Yes All turtles-N/A	All mammals-Yes All turtles-N/A	Harp seals-Yes White-sided dolphin-Yes Gray seals-No Harbor seals-No Harbor porpoises-No Common dolphins-No
Rationale				

The list of ETP species known to interact with the UoA fishery and gear types are given in Table 14, above. We regard those species with “national or international limits” as those with Potential Biological Removal specified.

For **marine mammals**, this includes gray seals, harbor seals, harp seals, harbor porpoises and common dolphins. For these species, both the effects of the UoA fisheries and other MSC UoAs are known, and the combined mortalities in all cases are reported as below the PBR levels with high likelihood, hence the SG80 is met. However, due to the uncertainties in mortality estimates in some cases (due to cryptic mortalities, or unidentified sources of mortality), it cannot be said with a high degree of certainty in all cases that the combined effects of MSC UoAs are within these limits. This is the case for gray seals, harbor seals, harbor porpoises and common dolphins. The SG100 is not met for these species. However, the combined mortalities for harp seals and white-sided dolphins are less than 10% of PBR, therefore the SG100 is met for these species. Please see section 7.4.2 for further details.

For **sea turtles**, this list includes loggerhead, Kemp's Ridley and leatherback species, none of which have limits as defined by MSC, thus they are not scored against this scoring issue.

Direct effects				
b				
	Guide post	Known direct effects of the UoA are likely to not hinder recovery of ETP species.	Direct effects of the UoA are highly likely to not hinder recovery of ETP species.	There is a high degree of confidence that there are no significant detrimental direct effects of the UoA on ETP species.

	Met?	All mammals-Yes All turtles-Yes	All mammals-Yes All turtles-Yes	Harp seals-Yes White-sided dolphin-Yes Gray seals-No Harbor seals-No Harbor porpoises-No Common dolphins-No Turtles (3)-No
Rationale				

For all marine mammals encountered by this fishery, the direct effects of the UoA are highly likely to not hinder the recovery of the species, as reported in each stock assessment report, which outlines the status of each species, the PBR, and the estimated total mortalities and mortalities by fishery, including the two UoA fisheries in this assessment. In all cases, total mortalities are below PBR. Please see Table 14 and section 9.1.1 for further details. The SG80 is met. For harp seals and white-sided dolphins, the SG100 is also met because, according to the stock assessment reports, total mortalities to these species are less than 10% of the assigned PBR, therefore there is a high degree of confidence that there are no significant detrimental direct effects of the UoAs on these species.

The three species of **sea turtles** with which this fishery interacts are all endangered, with species-specific recovery plans in place as required by the ESA. Interactions between the Northeast sink gillnet UoA and loggerhead, Kemp's Ridley, and Leatherback sea turtles have been recorded in observer data between 2015 and 2019 (Table 14), with the largest numbers of observations occurring with loggerhead turtles. Murray (2018) estimated both total bycatch and mortalities between 2012 and 2016 for the greater Atlantic region sink gillnet fisheries. She reported a total of 557 loggerhead mortalities, 115 Kemp's Ridley mortalities, 21 leatherback mortalities and 88 unidentified hard-shelled turtle mortalities in total over this 5-year period. Eighty-seven percent of this bycatch was attributed to trips catching monkfish, skates, or spiny dogfish. It is important to note that this includes both the mid-Atlantic and Northeast sink gillnet fisheries, and the present gillnet UoA is the Northeast area only. Interactions between sea turtles and gillnets is higher in the southern Mid-Atlantic, in warm surface temperature water.

The most recent population trend analysis for the Northern Recovery Unit of **loggerhead** turtles shows an increasing trend (measured in numbers of nests) of 1.3% since 1983 (Bolten, et. al. 2019). This annual rate of increase is encouraging, but below the 2% criterion for achieving recovery. The coastwide sink gillnet fishery is responsible for roughly 100 mortalities annually, and 87% of the total sea turtle bycatch annually (Murray 2018). However, the UoA fisheries are in the Northeast region only, where water temperatures are colder and sea turtles are less frequently sighted. The combination of population trend increase and relatively low contribution to fisheries mortality means that the direct effects of the UoA are highly unlikely to hinder the recovery of this species, and the SG80 is met. Evidence is not sufficient for a score of 100. There is a bi-national recovery plan for **Kemp's Ridley** turtles, shared between the US and Mexico, as the distribution and nesting habitat for this turtle is centered in the southern Gulf of Mexico. The recovery plan was first issued in 1984, and it's most recent (2nd) revision was published in 2011 (NMFS 2011). In 2015, a 5-year review was published in which progress toward achieving the criteria necessary for downlisting or delisting this species on the ESA was reported (NMFS and USFWS 2015). Two criteria are necessary for downlisting from Endangered to Threatened status, one of which is met (recruitment of at least 300,000 hatchlings into the marine environment per season at the three primary nesting beaches), and one which is not met (at least 10,000 nesting females per season—currently there are fewer than half that many estimated). The criteria concerning protection of terrestrial nesting habitat, nesting females, and hatchlings are by-and-large successfully ongoing or have been met. Ongoing threats are thought to be in the marine environment, including from bycatch in fishing gear—particularly skimmer trawl gear for shrimp in the Gulf of Mexico and Atlantic. There have been no recent records of any turtles being caught in the Northeast bottom trawl UoA, most likely because they operate further north than the foraging range for this species (off Virginia and southward). The Northeast gillnet UoA has one recorded interaction with this species in the past 5 years, with the 115 coastwide gillnet mortalities estimated from 2012-2016 (roughly 23 annually) again probably coming from the mid-Atlantic and Southeast sink gillnet fisheries which overlap with the

foraging range for this species. The combination of success in the ESA recovery plan and low contribution of the UoA to fishery-related mortality means the SG80 is met. However, there is not sufficient evidence to award a score of 100.

Because there is uncertainty related to the potential for the Northeast fisheries to interact with sea turtles having primarily a more southerly distribution as described above, it would be useful, particularly in light of potential climate change impacts on foraging distributions for these turtles, to gain a better understanding of trends in interactions from the fishing fleet in the Northeast. It is thus **recommended** that the client provides the assessment team with an opportunity to meet with gillnet vessel operators to discuss this issue during the first annual audit and subsequently, in order to qualitatively verify the validity of assumptions made above regarding relative impacts in the Northeast (UoA) vs Mid-Atlantic and Southeast components of this fishery.

Indirect effects				
C	Guide post		Indirect effects have been considered for the UoA and are thought to be highly likely to not create unacceptable impacts.	There is a high degree of confidence that there are no significant detrimental indirect effects of the UoA on ETP species.
	Met?		Yes	No
Rationale				

Indirect threats to both marine mammals and marine turtles are considered, along with direct threats, in their respective stock assessments and recovery plans. In none of these cases are indirect effects from marine fisheries considered a significant contributor to overall threat level. The SG80 is met, but not SG100 because achieving a high degree of confidence would require more positive evidence (references below to stock assessment reports, recovery plans and progress reports for all relevant species).

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GRAY SEAL (*Halichoerus grypus atlantica*): Western North Atlantic Stock (2018)

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HARP SEAL (*Pagophilus groenlandicus*): Western North Atlantic Stock (2018)

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	60-79
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	Recommendation 1

PI 2.3.2 – ETP species management strategy

PI 2.3.2		<p>The UoA has in place precautionary management strategies designed to:</p> <ul style="list-style-type: none"> - meet national and international requirements; - ensure the UoA does not hinder recovery of ETP species. <p>Also, the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of ETP species</p>		
Scoring Issue		SG 60	SG 80	SG 100
a	Management strategy in place (national and international requirements)			
	Guide post	There are measures in place that minimise the UoA-related mortality of ETP species, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species.	There is a strategy in place for managing the UoA's impact on ETP species, including measures to minimise mortality, which is designed to be highly likely to achieve national and international requirements for the protection of ETP species.	There is a comprehensive strategy in place for managing the UoA's impact on ETP species, including measures to minimise mortality, which is designed to achieve above national and international requirements for the protection of ETP species.
	Met?	All mammals-Yes All turtles-Yes	All mammals-Yes All turtles-Yes	All mammals-No All turtles-No
Rationale				

There is a strategy in place for all US federally managed fishery for managing fishery impacts on ETP species, including measures to minimize mortality which is designed to be highly likely to achieve regulatory requirements for the protection of these species. This includes the UoA fishery under assessment as described in the skate FMP, as well as overarching requirements under the Endangered Species Act and Marine Mammal Protection Act as implemented through ESA-listed species recovery plans. These strategies are in place and designed to be highly likely to achieve national requirements for protection and recovery, as they have explicit objectives and actions necessary to achieve this, together with measurable criteria, which, when met, will allow the species or population to be removed from the ESA list. While these recovery plans are designed to address all sources of threat to the species in question (not just threats from fisheries), where fisheries are considered to be a contributing threat, the recovery plans explicitly address this. Concerning marine mammals which are not also ESA listed, the MMPA provides a very specific framework under which incidental take within fisheries is permitted, and these fisheries are only authorized when it can be demonstrated through a Biological Opinion that their take will not exceed PBR or otherwise hinder their recovery. The SG80 is clearly met for all ETP species. The SG100 is not met because these strategies are not generally designed to achieve **above** national or international protection and recovery requirements.

Management strategy in place (alternative)				
b	Guide post	There are measures in place that are expected to ensure the UoA does not hinder the recovery of ETP species.	There is a strategy in place that is expected to ensure the UoA does not hinder the recovery of ETP species.	There is a comprehensive strategy in place for managing ETP species, to ensure the UoA does

				not hinder the recovery of ETP species.
	Met?	N/A	N/A	N/A
Rationale				

Not applicable—there are national and/or international requirements for the protection of all ETP species in this list.

Management strategy evaluation				
c	Guide post	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).	There is an objective basis for confidence that the measures/strategy will work, based on information directly about the fishery and/or the species involved.	The strategy/comprehensive strategy is mainly based on information directly about the fishery and/or species involved, and a quantitative analysis supports high confidence that the strategy will work.
	Met?	All mammals-Yes All turtles-Yes	All mammals-Yes All turtles-Yes	No
Rationale				

For marine mammals, the maintenance of mortalities below the respective PBR levels is an objective basis for confidence that the strategy for mitigating impacts to marine mammals as required under the MMPA is working. Annual stock assessments for all marine mammals are available and reported mortalities from fisheries and other causes are well monitored and quantified. The SG80 is met. However, since there are uncertainties in the data around both stock status and incidental take in marine fisheries, a high confidence is not indicated. The SG100 is not met.

For sea turtles, the information contained in the respective recovery plan progress reports show evidence that efforts under the strategy are working to improve the status of all populations or relevant subunits, albeit not always at the target rate (e.g. loggerheads). The progress against goals within the recovery strategies, and fishery interactions are both regularly monitored and reported. This is sufficient for the SG80. However, the progress reports do not generally contain quantitative analyses necessary to support high confidence that the objectives are being met, and the sink gillnet fisheries for dogfish and skates remain the main source of fishery related mortality for these species (albeit most likely in the southern areas not part of these UoAs). In fact, in some cases, they very clearly point out deficiencies in implementing some aspects of the strategies. The SG100 is not met for any sea turtle species.

Management strategy implementation				
d	Guide post		There is some evidence that the measures/strategy is being implemented successfully.	There is clear evidence that the strategy/comprehensive strategy is being implemented successfully and is achieving its objective as set out in scoring issue (a) or (b) .

	Met?	All mammals-Yes All turtles-Yes	All mammals-Yes All turtles-No
Rationale			

In general, for marine mammals and marine turtles, there is evidence that the recovery strategies mandated by the ESA are working to prevent extinction and promote recovery of ESA listed species (Valdivia et. al. 2019).

For marine mammals, the maintenance of mortalities below the respective PBR levels clear evidence that the strategy for mitigating impacts to marine mammals as required under the MMPA is being implemented successfully and achieving the objectives set out in scoring issue a. Annual stock assessments for all marine mammals are available and reported mortalities from fisheries and other causes are well monitored and quantified. There are no cases where PBR is being exceeded, and all fisheries are operating as permitted under the MMPA with appropriate Incidental Take Statements and corresponding requirements for observer coverage. The SG100 is met.

For loggerhead sea turtles, there is some evidence in the 2019 progress report on the implementation of the national recovery plan that the recovery strategy is being implemented successfully and the rate of recovery as measured via the beach nesting surveys has been roughly 1.2% annually since 1986 for the northern nesting unit (Bolten et. al 2019). Progress against objectives has been reported to reduce loggerhead bycatch in some fisheries, including gillnet fisheries. However, the nesting recovery rate is shy of the 2% recovery rate goal, and there is also acknowledgement in this progress report that there are parts of the strategy that are not being implemented successfully at present. Therefore, the SG80 is met but not the SG100.

Review of alternative measures to minimize mortality of ETP species				
e	Guide post	There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species.	There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of ETP species and they are implemented as appropriate.	There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality ETP species, and they are implemented, as appropriate.
	Met?	Yes	Yes	No
Rationale				

The US National Bycatch Reduction Strategy Implementation Plan 2020-2024 (NOAA Fisheries 2020) is the latest operationalization of the National Bycatch Reduction strategy (NOAA Fisheries 2016), finalized by NOAA Fisheries in 2016. The goal of the 2016 National Bycatch Reduction Strategy is to guide and coordinate NOAA Fisheries' efforts to reduce bycatch and bycatch mortality in support of sustainably managing fisheries and recovering and conserving protected species. The implementation of the strategy occurs at regional, national, and international levels, and includes a number of short-, medium- and long-term actions designed to achieve the objectives of the strategy. There are also a number of continuous actions within the strategy, that reflect ongoing efforts such as the Bycatch Reduction Engineering Program (BREP).

The objective of the BREP is to support the development of technological solutions and changes in fishing practices designed to minimize bycatch of fish and protected species (including marine mammals and sea

turtles). Current priorities in the Northeast region are aimed at reduction of whale entanglements in the pot/trap fisheries through investigation of ropeless gear and improving post-release mortality of shortfin mako sharks in all gears. In addition, a grant has recently been let to do collaborative research with a German institution on reaction of small cetaceans to an acoustically enhanced gillnet, and its application to reduce their bycatch. In 2018, a grant was awarded to Duke University to test the applicability of sensory-based bycatch reduction technologies to reduce sea turtle bycatch in North Carolina coastal gillnet and pound net fisheries, and one grant to Newcastle University to develop low-cost solutions to cetacean bycatch in gillnet fisheries. In 2015, studies into the usefulness of deploying LED lights on gillnets was explored in its ability to reduce seabird and turtle bycatch (NOAA Fisheries 2016b). These studies have continued into testing/trial phase the North Carolina gillnet fisheries through 2019, where preliminary results show that net illumination does not change target catch rates and may decrease the bycatch of unwanted fish species (as well as birds and turtles). Thus far, there has not been any implementation of this alternative measure, most likely because the test fishery work is not finished, and as mentioned earlier, there are other fisheries in which bycatch mitigation is considered a higher priority.

It is therefore clear that regular review of the practicality and effectiveness of alternative measures to reduce ETP mortality is undertaken, through implementation of the National Bycatch Reduction Strategy, particularly within the BREP, therefore the SG80 is met. However, because the Strategy is wide ranging and the focus of the BREP projects are wide ranging, it cannot be said that there are biennial reviews of alternative measures specific to the two fishery UoAs in this assessment. Thus, the SG100 is not met.

References

NOAA Fisheries (2020). National Bycatch Reduction Strategy Implementation Plan 2020-2024. 24 pp. Accessed at:

<https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwiw4unSgJfsAhVMo54KHdoYCJMqFjABegQIAhAC&url=https%3A%2F%2Fwww.fisheries.noaa.gov%2Fwebdam%2Fdownload%2F107045645&usg=AOvVaw1A0rNtBzHRLb2PAObEdnDh>

NOAA Fisheries (2016a). National Bycatch Reduction Strategy. U.S. Department of Commerce. National Oceanic and Atmospheric Administration. National Marine Fisheries Service. 16 pp. Accessed at: <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiw4unSgJfsAhVMo54KHdoYCJMqFjACegQIBxAC&url=https%3A%2F%2Fwww.fisheries.noaa.gov%2Finternational%2Fbycatch%2Fnational-bycatch-reduction-strategy&usg=AOvVaw2y1K9kFHnU-lejyl75soBN>

NOAA Fisheries (2016b) Bycatch Reduction Engineering Program FY 2015 & 2016 Report to Congress. Accessed at: <https://www.fisheries.noaa.gov/webdam/download/88172694>

Valdivia A, Wolf S, Suckling K (2019) Marine mammals and sea turtles listed under the U.S. Endangered Species Act are recovering. PLoS ONE 14(1): e0210164. <https://doi.org/10.1371/journal.pone.0210164>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	60-79
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	

PI 2.3.3 – ETP species information

PI 2.3.3		Relevant information is collected to support the management of UoA impacts on ETP species, including:		
		<ul style="list-style-type: none"> - Information for the development of the management strategy; - Information to assess the effectiveness of the management strategy; and - Information to determine the outcome status of ETP species 		
Scoring Issue		SG 60	SG 80	SG 100
a	Information adequacy for assessment of impacts			
	Guide post	Qualitative information is adequate to estimate the UoA related mortality on ETP species. OR If RBF is used to score PI 2.3.1 for the UoA: Qualitative information is adequate to estimate productivity and susceptibility attributes for ETP species.	Some quantitative information is adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species. OR If RBF is used to score PI 2.3.1 for the UoA: Some quantitative information is adequate to assess productivity and susceptibility attributes for ETP species.	Quantitative information is available to assess with a high degree of certainty the magnitude of UoA-related impacts, mortalities and injuries and the consequences for the status of ETP species.
	Met?	All ETP species-Yes	All ETP species-Yes	All ETP species-No
Rationale				

For all ETP marine mammals considered in this assessment, there is a stock assessment based on at least some quantitative information about population size, status, and trends, usually sufficient to determine a minimum population size, and corresponding PBR. In addition, there are quantitative estimates of fishery-related mortalities and injuries based on observer data, as well as estimates of other sources of mortality from strandings and other reports. This is sufficient to satisfy the SG80 requirement of some quantitative data adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP marine mammals.

For ETP sea turtles, there are estimates of total bycatch and mortalities in the sink gillnet fishery and from all sources for the greater Atlantic region (Murray 2018). Mortalities are regularly monitored and reflected in the observer data. In addition, within each species' recovery plan there is a set of metrics against which progress is updated at least every 5-years in the respective recovery plan progress reports. This is sufficient to satisfy the SG80 requirement of some quantitative data adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of ETP marine turtles.

However, inherent uncertainties in population estimates and trends, as well as uncertainties in mortality and interaction data arising from limited observer coverage and the potential for cryptic interactions precludes a high degree of certainty. Thus, the SG100 is not met.

Information adequacy for management strategy				
b	Guide post	Information is adequate to support measures to manage the impacts on ETP species.	Information is adequate to measure trends and support a strategy to manage impacts on ETP species.	Information is adequate to support a comprehensive strategy to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives.
	Met?	All ETP species-Yes	All ETP species-Yes	All ETP species-No
Rationale				

Observer coverage and other monitoring available for fishery interactions with ETP species is available, as well as estimates of population size, status and trends for ETP species. This information does support a strategy to manage impacts on ETP species. For **marine mammals**, the LOF is updated annually to reflect changes in estimated mortalities from specific fisheries relative to PBR, and as a result, reassign priorities for observer coverage and other reporting and monitoring requirements under the MMPA, and re-initiation of Section 9 consultations under the ESA. This is sufficient to meet the SG80. The SG100 is not met because there is not a high degree of certainty that the strategy is meeting its objectives for all species, particularly those where estimated takes are close to PBR, such as for the gray seals in the gillnet fishery, and where cryptic mortalities and sublethal injuries are thought to be higher than recorded.

For sea turtles progress against ESA-mandated recovery plans is reported at least every 5 years. Observer coverage and other monitoring available for sea turtle population viability studies and mortalities (fisheries and non-fisheries). This is all described in more detail in the above PIs as well as the background section on sea turtles. The SG80 is met. The SG100 is not met because there is not sufficient information to support a high degree of certainty that the strategy is meeting its objectives for all species (as measured in their respective recovery plans).

References

See above under PI 2.3.1. and 2.3.2.

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	60-79
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	80
Condition number (if relevant)	

PI 2.4.1 – Habitats outcome

PI 2.4.1		The UoA does not cause serious or irreversible harm to habitat structure and function, considered on the basis of the area covered by the governance body(s) responsible for fisheries management in the area(s) where the UoA operates		
Scoring Issue		SG 60	SG 80	SG 100
a	Commonly encountered habitat status			
	Guide post	The UoA is unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.	The UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.	There is evidence that the UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm.
	Met?	All gears-Yes	All gears-Yes	All gears-No
Rationale				

This fishery is highly unlikely to reduce the structure and function of commonly encountered habitats to a point of serious or irreversible harm. Otter trawls are the more destructive of the two gears to bottom habitats. Of the commonly encountered habitats for this gear type, the impact of bottom trawls is dependent on variables such as fishing effort intensity, habitat type and recovery time. Commonly encountered habitats for this fishery include the geomorphologies bedforms, biogenic burrows, biogenic depressions, unfeathered surface sediments, and shell deposits on mud, sand and granule-pebble substrates. The dominant living organisms encountered in these habitats include hydroids and *Modiolus modiolus* horse mussels, both encountered in 10% of area swept by trawls according to NEFMC 2011. These are generally higher energy habitats with maximum recovery times of 5 years (most much less—on the order of days or weeks) (NEFMC 2011). MSC considers “serious or irreversible harm” to mean a reduction in habitat structure, biological diversity, abundance and function such that the habitat would be unable to recover to at least 80% of its unimpacted structure, biological diversity, and function with 5-20 years, if fishing were to cease entirely. Since commonly encountered habitats in this fishery generally recover in fewer than 5 years, and there are also closed areas where these habitat types are entirely protected from bottom fishing. Although we have not identified within all potential commonly encountered habitats, which ones are specifically impacted by the UoA activity and to what degree specifically, Tables 17 and 18 provide the susceptibility and recovery risk scores for all habitats with the potential to interact with bottom trawl and gillnet fisheries, present UoAs included. The EFH process results of these analysis as summarized in these two tables indicate that for all potential habitats impacted, there is at worst 25-50% area impacted with a recovery time of less than 5 years (for the structure of low-energy cobble habitat). Therefore, at least the SG80 is met. A detailed analysis of the specific interactions between these gears and all commonly encountered habitats, as well as their extent, has not been conducted sufficient to warrant a score of 100.

VME habitat status				
b	Guide post	The UoA is unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.	The UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would	There is evidence that the UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would

			be serious or irreversible harm.	be serious or irreversible harm.
	Met?	Yes	Yes	No
Rationale				

Deep sea coral protections exist where fishing by the trawl UoA, along with most types of bottom tending gear, is prohibited. In the 2017 update to the “State of Deep-Sea Coral and Sponge Ecosystems of the United States Report” (Hourigan et. al. 2017) it is stated that “annual number of interactions between fishing gear and deep-sea corals and sponges is not known, but bycatch data indicate that a relatively small number of trips interact with dep-sea corals.” Data as viewed through the Northeast Ocean Data GIS mapping tool (<https://www.northeastoceandata.org/>) on skate distribution and deep sea coral habitat suitability also provides evidence that the skate fishery generally would not take place over habitat areas suitable to deep sea corals. Lastly, an omnibus deep-sea coral amendment is currently in proposed rule stage within the NEFMC process. If the rule becomes law, the following deep-sea coral protection area will prohibit bottom fishing for all fisheries in the region “The Omnibus Deep-Sea Coral Amendment would establish deep-sea coral protection areas on the outer continental shelf in New England waters. It would complement the Frank R. Lautenberg Deep-Sea Coral Protection Area established by the Mid-Atlantic Fishery Management Council in Amendment 16 to the Atlantic Mackerel, Squid, and Butterfish Fishery Management Plan (FMP) (81 FR 90246; December 14, 2016) as described in § 648.372. The area would run along the outer continental shelf in waters no shallower than 600 meters and extend to the outer limit of U.S. Exclusive Economic Zone (EEZ) boundary to the east and north, and south to the intercouncil boundary as described in § 600.105(a). The Council proposed this coral protection area to prevent the expansion of fishing effort into deep-water coral areas, while limiting impacts on current fishing operations (<https://s3.amazonaws.com/nefmc.org/2019-28424.pdf>)” Therefore the UoAs are highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm.

Minor habitat status				
C	Guide post			There is evidence that the UoA is highly unlikely to reduce structure and function of the minor habitats to a point where there would be serious or irreversible harm.
	Met?			No

Minor habitats have not been classified or assessed within this assessment process.

References

Hourigan TF, Etnoyer PJ, Cairns SD (2017). The State of Deep-Sea Coral and Sponge Ecosystems of the United States. NOAA Technical Memorandum NMFS-OHC-4. Silver Spring, MD. 467 p.

DeAlteris, Joseph, Brian Ahlers and Richard Allen. U.S. Northeastern coast Longfin Inshore Squid and Northern Shortfin Squid Bottom Trawl Fishery. MSC Fishery Assessment Report. SCS Global Services. March 29, 2020.

Proposed Rule for deep sea coral protection omnibus amendment
<https://s3.amazonaws.com/nefmc.org/2019-28424.pdf>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	80
Condition number (if relevant)	

PI 2.4.2 – Habitats management strategy

PI 2.4.2		There is a strategy in place that is designed to ensure the UoA does not pose a risk of serious or irreversible harm to the habitats		
Scoring Issue		SG 60	SG 80	SG 100
a	Management strategy in place			
	Guide post	There are measures in place, if necessary, that are expected to achieve the Habitat Outcome 80 level of performance.	There is a partial strategy in place, if necessary, that is expected to achieve the Habitat Outcome 80 level of performance or above.	There is a strategy in place for managing the impact of all MSC UoAs/non-MSC fisheries on habitats.
	Met?	Yes	Yes	No
Rationale				

There is at least a partial strategy in place expected to achieve the habitat outcome 80 level of performance, or above. This comprises EFH requirements in the MSA and consequent habitat protection measures. Habitats and fishery effects on them are well studied in this region and information is used to inform management. Designation of HAPCs is one example of this, as is the Omnibus Amendment currently in process concerning deep sea coral habitat protections in the region. This combination of measures comprises at least a partial strategy, hence meeting the SG80, however because a program of activities specifically designed to manage impacts to habitats does not clearly exist, the SG100 is not met.

Management strategy evaluation				
b	Guide post	The measures are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar UoAs/habitats).	There is some objective basis for confidence that the measures/partial strategy will work, based on information directly about the UoA and/or habitats involved.	Testing supports high confidence that the partial strategy/strategy will work, based on information directly about the UoA and/or habitats involved.
	Met?	Yes	Yes	No
Rationale				

The SASI model outputs, and evidence of downward-trending bottom impact to habitats contained therein, in addition to good information on skate species overlap with different habitat types (indicating where fishing is likely to occur in relation to these habitat types), gives some objective basis for confidence that the partial strategy will work based on information directly about the UoA and habitats involved. The SG80 is met. More information and analysis will be needed to evaluate the SG100.

Management strategy implementation				
c	Guide post		There is some quantitative evidence that the measures/partial strategy is being	There is clear quantitative evidence that the partial strategy/strategy is being implemented successfully

			implemented successfully.	and is achieving its objective, as outlined in scoring issue (a).
	Met?		Yes	No
Rationale				

There is some quantitative evidence of successful implementation of habitat protections in the way of closed areas on the basis of VMS monitoring and enforcement records. The SASI model also provides an estimate of cumulative adverse impact of the UoA on habitat, but this is based on a model containing many assumptions, therefore it cannot be considered as “clear quantitative evidence” The SG80 but not SG100 is met.

Compliance with management requirements and other MSC UoAs/non-MSC fisheries' measures to protect VMEs				
d	Guide post	There is qualitative evidence that the UoA complies with its management requirements to protect VMEs.	There is some quantitative evidence that the UoA complies with both its management requirements and with protection measures afforded to VMEs by other MSC UoAs/non-MSC fisheries, where relevant.	There is clear quantitative evidence that the UoA complies with both its management requirements and with protection measures afforded to VMEs by other MSC UoAs/non-MSC fisheries, where relevant.
	Met?	Y	Y	Y
Rationale				

Habitat protection measures applying to other MSC and non-MSC fisheries also apply to this fishery. The application of habitat protection measures set out in particular FMPs specify applicability to other FMPs and across Councils in most cases. Therefore, there are not really any relevant protections that apply here. This scoring issue therefore defaults to 100.

References

NEFMC 2011. See also references under 2.4.1.

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	

PI 2.4.3 – Habitats information

PI 2.4.3		Information is adequate to determine the risk posed to the habitat by the UoA and the effectiveness of the strategy to manage impacts on the habitat		
Scoring Issue		SG 60	SG 80	SG 100
a	Information quality			
	Guide post	<p>The types and distribution of the main habitats are broadly understood.</p> <p>OR</p> <p>If CSA is used to score PI 2.4.1 for the UoA: Qualitative information is adequate to estimate the types and distribution of the main habitats.</p>	<p>The nature, distribution and vulnerability of the main habitats in the UoA area are known at a level of detail relevant to the scale and intensity of the UoA.</p> <p>OR</p> <p>If CSA is used to score PI 2.4.1 for the UoA: Some quantitative information is available and is adequate to estimate the types and distribution of the main habitats.</p>	The distribution of all habitats is known over their range, with particular attention to the occurrence of vulnerable habitats.
	Met?	Yes	Yes	No
Rationale				

There is information on the types and distribution of main habitats in the area of the fishery that is adequate to broadly understand the nature of the main impacts of gear use on these habitats, including spatial overlap of habitat with fishing gear broadly, though the specific overlap with the fisheries using bottom trawl and sink gillnet to target skates has not been quantified specifically. Relative vulnerability of the habitat in the managed area has been modelled based on geological and biological features and modelled energy levels have been used to assign susceptibility and recovery scores under the SASI approach (see tables above, and in NEFMC 2011). A Habitat Protection Index was calculated for top habitats identified as vulnerable to adverse fishing impacts based on an estimate of EFH protected in the given alternative over the total amount of EFH designated. There has also been significant information gathering efforts undertaken to support the design of the Omnibus Amendment for deep sea coral protection, including surveys of coral and sponge distribution and workshops with stakeholders to obtain diverse perspectives on fishery impacts and effective and practicable management alternatives. The SG80 is met. The SG100 is not met because the distribution of all habitats is not known across their ranges.

Information adequacy for assessment of impacts				
b	Guide post	Information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap	Information is adequate to allow for identification of the main impacts of the UoA on the main habitats, and there is reliable information on	The physical impacts of the gear on all habitats have been quantified fully.

		of habitat with fishing gear. OR If CSA is used to score PI 2.4.1 for the UoA: Qualitative information is adequate to estimate the consequence and spatial attributes of the main habitats.	the spatial extent of interaction and on the timing and location of use of the fishing gear. OR If CSA is used to score PI 2.4.1 for the UoA: Some quantitative information is available and is adequate to estimate the consequence and spatial attributes of the main habitats.	
	Met?	Yes	Yes	No
Rationale				

The information available from observational and experimental studies of bottom trawls (see NEFMC 2011) is sufficient to identify the main impacts of the UoA on its main habitats of interaction, but there are gaps in the information available that prevent the UoA from achieving the SG100 criteria for full quantification of physical impacts on all habitats.

The spatial extent of interaction and timing and location of use of fishing gear is generally available from VMS and VTR data. Although there are areas for improvement, the information available is sufficient to identify main impacts of the UoA on main habitats, and fishery dependent information (i.e., VTR and VMS) data provide consistent information on the timing and location of the deployment of the gear. SG80 is met.

Monitoring				
C	Guide post		Adequate information continues to be collected to detect any increase in risk to the main habitats.	Changes in all habitat distributions over time are measured.
	Met?		Yes	No
Rationale				

Adequate information continues to be collected to detect any increase in risk to the main habitats, thus meeting the SG 80 level. This information includes ongoing monitoring of distribution of fishing effort, and consideration of impacts of any updates to fishery management plans on habitat, and the 5-year EFH cycle. The SG80 are met. All habitats (including minor ones) are not measured over time, thus the SG100 is not met.

References

NEFMC 2011; Proposed Rule for deep sea coral protection omnibus amendment
<https://s3.amazonaws.com/nefmc.org/2019-28424.pdf>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	More information sought

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	80
Condition number (if relevant)	

PI 2.5.1 – Ecosystem outcome

PI 2.5.1		The UoA does not cause serious or irreversible harm to the key elements of ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Ecosystem status			
	Guide post	The UoA is unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	The UoA is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.	There is evidence that the UoA is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm.
	Met?	Yes	Yes	No
Rationale				

The two ecological criteria considered key ecosystem elements that may be affected by fisheries are primary and secondary productivity and trophically linked populations. Winter and little skates are not considered to be key species for ecosystem functioning. There are numerous ecosystem research and management initiatives that directly evaluate trends in ecosystem components and associated stressors, including the ecological communities and trophic structures in the NES LME. These are primarily summarized in the NEFSC Ecosystem Status Report- available at <https://www.nefsc.noaa.gov/ecosys/ecosystem-status-report/>, and key findings have been summarized in the background section of this report.

While there have been significant shifts in phytoplankton and zooplankton community structure in the NES LME, evidence does not indicate that base food web productivity is driven by top-down forces such as fishing pressure. Historical trend data on fish community structure provides evidence that fisheries can have a significant effect on the ecological community, and the ecosystem is also undergoing significant changes due to the changing ocean climate. This evidence also indicates that management has had success in rebuilding some stocks, suggesting that such overfishing impacts can be considered 'reversible'. Importantly, none of the main species caught in the three UoAs are considered overfished (See PIs 2.1.1-2.2.3). Because there is no clear evidence that bottom trawl, and gillnet are highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm. The SG100 is not met.

References

NEFSC Ecosystem Status Report (no date)- available at <https://www.nefsc.noaa.gov/ecosys/ecosystem-status-report>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	80
Condition number (if relevant)	

PI 2.5.2 – Ecosystem management strategy

PI 2.5.2		There are measures in place to ensure the UoA does not pose a risk of serious or irreversible harm to ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
a	Management strategy in place			
	Guide post	There are measures in place, if necessary which take into account the potential impacts of the UoA on key elements of the ecosystem.	There is a partial strategy in place, if necessary, which takes into account available information and is expected to restrain impacts of the UoA on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.	There is a strategy that consists of a plan , in place which contains measures to address all main impacts of the UoA on the ecosystem, and at least some of these measures are in place.
	Met?	Yes	Yes	Yes
Rationale				

As described in the background, there are several policies, ongoing research activities, and management practices that work to restrain impacts of the UoA on the ecosystem and that address all main impacts of the UoA. There is not an ecosystem strategy in place, but this is not necessary per SA3.17.3.2 where there are individual strategies addressing other components under P1 and P2.

There is a broad management framework available that looks after ecosystem impacts of fishing as a whole, when the 10 National Standards are taken together as management objectives. Impacts of the fishery on identified 'valued ecosystem components' are considered for all Council actions. The MAFMC adopted an objective for an ecosystem approach to fisheries management in 2011. The Council has adopted ecosystem approaches as an objective in their strategic plan, and there is evidence of consideration of plans to operationalize this objective; however, to date no operational plan is in place. The New England Fisheries Management Council (NEFMC) is also working in exploring Ecosystem-Based Fishery Management (EBFM) (the last action of the EBFM committee included an example fishery ecosystem plan for Georges Bank (https://s3.amazonaws.com/nefmc.org/9_Short-Draft-Example-Fishery-Ecosystem-Plan-for-Georges-Bank.pdf)).

In addition to monitoring and evaluation systems to manage ecosystem components (e.g., stock assessments, SBRM reports, EFH designations), NEFSC publishes an ecosystem status report encompassing the entire LME and considering differences at a sub-regional level. Many, though not all, of the above measures are designed with ecosystem-based management as an objective.

Although the Ecosystem Approach is under development by the Councils, there are existing strategies targeted at the ecosystem components reflected in Principles 1 and 2 that together work to maintain ecosystem structure and function. These strategies, described in the background and under PIs 2.X.2, in conjunction with the efforts at the Council to integrate towards an Ecosystem Approach, is sufficient to meet the SG100.

Management strategy evaluation				
b	Guide post	The measures are considered likely to work, based on plausible	There is some objective basis for confidence that the	Testing supports high confidence that the partial strategy/ strategy

		argument (e.g., general experience, theory or comparison with similar UoAs/ ecosystems).	measures/ partial strategy will work, based on some information directly about the UoA and/or the ecosystem involved.	will work, based on information directly about the UoA and/or ecosystem involved.
	Met?	Yes	Yes	No
Rationale				

The strategy takes into account available information from the fishery from stock assessments, SBRM reports and EFH designations. Because the ecosystem strategy operates at a federal level and influences all the FMPs that are included in the two UoAs involved in this fishery, it is considered that this strategy is expected to restrain impacts of the fishery on the ecosystem, meeting SG80. There are also measures which are part of the strategy, that are already in place (i.e., catch limits for federally managed species, EFH designations, and on-board observer programs). However, because the plan for ecosystem management for the NEFMC is still under development it cannot be said that there is a plan based on a well-understood functional relationship between the fishery and the components and elements of the ecosystem, thus the SG100 is not met.

Management strategy implementation				
C	Guide post		There is some evidence that the measures/partial strategy is being implemented successfully .	There is clear evidence that the partial strategy/strategy is being implemented successfully and is achieving its objective as set out in scoring issue (a) .
	Met?		Yes	No
Rationale				

Under the 10 National Standards, federal fisheries are managed to minimize impacts on components of the ecosystem, though the focus of this management is on federally managed commercial species, versus ecological communities.

In this UoA, federally managed species comprise the majority of the catch, and all main species have a healthy stock status. Reporting on catch composition across all fleets is published annually. Habitat impacts have been modelled for consideration of impacts on designated EFH for all federally managed species. ETP species are also monitored with regulatory mechanisms to spur management response when impacts exceed biological limits.

This ongoing monitoring linked with management mechanisms provides an objective basis for confidence that the strategy will work. However, as noted above much of this management focuses on particular components of the ecosystem rather than the overarching ecosystem structure and function. There is not yet a cohesive ecosystem-based management plan that has been operationalized or accordingly that has been tested. SG80 is met.

References

NEFSC Ecosystem Status Report (no date)- available at <https://www.nefsc.noaa.gov/ecosys/ecosystem-status-report>

<https://www.nefmc.org/library/april-2019-ecosystem-based-fishery-management-ebfm-committee-report>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	80
Condition number (if relevant)	

PI 2.5.3 – Ecosystem information

PI 2.5.3		There is adequate knowledge of the impacts of the UoA on the ecosystem		
Scoring Issue		SG 60	SG 80	SG 100
a	Information quality			
	Guide post	Information is adequate to identify the key elements of the ecosystem.	Information is adequate to broadly understand the key elements of the ecosystem.	
	Met?	Yes	Yes	
Rationale				

There is substantial information available on the key elements of the ecosystem, primarily available from the NEFSC Ecosystem Status Report website. This report summarizes the key ecosystem elements, both abiotic and biotic, which are monitored regularly. Supporting and additional information is available from the monitoring efforts associated with the management of the ecosystem components as described in PIs 2.1.3, 2.2.3, and 2.4.3. SG80 is met.

Investigation of UoA impacts				
b	Guide post	Main impacts of the UoA on these key ecosystem elements can be inferred from existing information, but have not been investigated in detail.	Main impacts of the UoA on these key ecosystem elements can be inferred from existing information, and some have been investigated in detail.	Main interactions between the UoA and these ecosystem elements can be inferred from existing information, and have been investigated in detail.
	Met?	Yes	Yes	No
Rationale				

Main impacts of the UoA can be inferred, and some have been investigated in detail. The management system considers fishery impacts on 'valued ecosystem components' with each management action, and particular impacts by the fishery may be investigated in detail when considering alternative management actions (such as closures or gear modifications). There are also available studies that investigate the trophic web of the NES LME. However, it cannot be said that all main interactions have been investigated in detail. SG80 is met but not SG100.

Understanding of component functions				
c	Guide post		The main functions of the components (i.e., P1 target species, primary, secondary and ETP species and Habitats) in the ecosystem are known.	The impacts of the UoA on P1 target species, primary, secondary and ETP species and Habitats are identified and the main functions of these components in the ecosystem are understood.

	Met?		Yes	No
Rationale				

All main species evaluated under Primary Species are federally managed, and are thus subject to their own FMPs, regular stock assessment, and EFH designations. For non-federally managed bycatch species catch/discard information is collected and monitored. ETP mammals also undergo stock assessments and fishery impacts are categorized annually via the LOF, and ETP turtles monitored according to their recovery plans. Key habitats are identified for all federally managed species as EFH. Biological and physical habitat impacts have been modeled for main gear types and federally managed fleets. The SG80 is met. The SG100 is not met because of the gaps in understanding of the main functions of components in the ecosystem.

Information relevance				
d	Guide post		Adequate information is available on the impacts of the UoA on these components to allow some of the main consequences for the ecosystem to be inferred.	Adequate information is available on the impacts of the UoA on the components and elements to allow the main consequences for the ecosystem to be inferred.
	Met?		Yes	No
Rationale				

All main species evaluated under Primary Species are federally managed, and are thus subject to their own FMPs, regular stock assessment, and EFH designations. For non-federally managed bycatch species catch/discard information is collected and monitored. ETP mammals also undergo stock assessments and fishery impacts are categorized annually via the LOF, and ETP turtles monitored according to their recovery plans. Key habitats are identified for all federally managed species as EFH. Biological and physical habitat impacts have been modeled for main gear types and federally managed fleets. The SG80 is met. The SG100 is not met because of the gaps in understanding of the main functions of components in the ecosystem.

Monitoring				
e	Guide post		Adequate data continue to be collected to detect any increase in risk level.	Information is adequate to support the development of strategies to manage ecosystem impacts.
	Met?		Yes	Yes
Rationale				

There is sufficient information available and collected to detect any increase in risk level. More information on the target species population dynamics, spawning distribution, and impacts of the fishery would benefit a strategy to directly manage for ecosystem impacts, but there is sufficient information to support the development of a strategy as described under 2.5.2. SG100 is met.

References

NEFSC Ecosystem Status Report (no date)- available at <https://www.nefsc.noaa.gov/ecosys/ecosystem-status-report>

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	

10 Principle 3

10.1 Principle 3 background

10.1.1 Area of operation of the UoA

Winter and Little skate are distributed along the coast of the northeast United States from near the tide line to depths exceeding 700 m (Figure 10; NEFMC 2003). The center of distribution for the winter skates is Georges Bank and Southern New England. The principle legislative instrument for fisheries management in the U.S. is the Magnuson-Stevens Fishery Conservation and Management Act or the Magnuson-Stevens Reauthorization Act (MSRA) and is implemented by the National Marine Fisheries Service (NMFS). The New England Fishery Management Council (NEFMC or Council) is one of eight regional councils established by the MSRA to manage fisheries between the 3 -200-mile limit off the coasts of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut (NEFMC 2020). The management authority of the Council extends to the Gulf of Maine, Georges Bank, and southern New England, and overlaps with the Mid-Atlantic Council for some species in that region (NEFMC 2020). The Council manages 29 species under nine Fishery Management Plans (FMPs), including sea scallops, Atlantic herring, groundfish, monkfish, whiting, red crab and skates.



Figure 11 Geographic range for Atlantic winter skate

10.1.2 Jurisdiction

The Winter and Little skate fisheries are under the jurisdiction of the Council and managed under the Northeast Skate Complex FMP. NOAA Fisheries Greater Atlantic Region serves as the implementing body for rules and regulations within the fishery. The 'skate complex' includes seven species: winter, smooth, thorny, barndoor, clearnose, little and rosette skates (NEFMC 2003). According to MSC FCR SA4.1.1, the jurisdictional category is single jurisdiction, and is managed solely by the Council (NEFMC). Because there are instances in which federal regulations also apply in state waters, the Council coordinates with the Atlantic States Marine Fisheries Commission (ASMFC) to manage some species, in addition to working directly with each state represented on the Council (NEFMC 2020). The skate complex fishery is managed using separate possession limits and coastwide quotas for both the bait and wing fisheries, with different seasonal quota periods for each (NOAA 2019).

10.1.3 Recognized groups with interests in the fishery and details of the fleet

The primary target species in the skate fishery are winter and little skates. Little skates are harvested primarily as bait for lobster and other fisheries, and winter skates are harvested for their wings for human

consumption (NOAA 2019). Skate is mostly harvested incidentally in trawl and gillnet fisheries, where vessels tend to catch skates when targeting other species (e.g., scallops, groundfish and monkfish) and land them if the price is high enough (NEMFC 2003). The bait fishery is a more directed skate fishery, involving vessels primarily from Southern New England ports that target a combination of little skates (>90%) and, to a lesser extent, juvenile winter skates (<10%; NEFMC 2003). The skate wing fishery evolved in the 1990s as skates were promoted as 'underutilized species' and fishermen shifted efforts from groundfish and other troubled fisheries to skates and dogfish (NEFMC 2003). The wing fishery is a more incidental fishery and involves a larger number of vessels located throughout the region. The fishing year is the same as the multispecies fishing year, which is May 1 – April 30. The skate fishing year will change if the multispecies fishing year changes to remain consistent.

There is considerable overlap with the winter skate, monkfish and regulated multispecies fisheries. Species harvested on presumed skate trips include groundfish, monkfish, and summer flounder, scallops, among others. The skate bait fishery occurs in New England waters and is largely composed of little skate. The UoAs have continual needs for liaison and co-ordination with other fishery and non-fishery ocean users. Various formal and informal venues are used to deal with these issues (SCS 2018).

There are currently no recreational possession restrictions for skates caught in federal waters. Recreational anglers must comply with minimum size regulations for all recreational fisheries in the region.

10.1.4 Legal and policy framework

The MSFCMA is the primary domestic legislation governing management of marine fisheries in the U.S. The Act was first enacted in 1976 and has been amended many times over the years. In 1996, the United States Congress reauthorized the MSA to include a new emphasis on the precautionary approach in U.S. fishery management policy. The MSFCMA, or MSRA, contains ten National Standards with which all fishery management plans (FMPs) must conform and which guide fishery management (NEFMC 2018a; 2018b).

These National Standards are:

1. Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the U.S. fishing industry;
2. Conservation and management measures shall be based upon the best scientific information available;
3. To the extent practicable, an individual stock of fish shall be managed as a unit throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination;
4. Conservation and management measures shall not discriminate between residents of different states. If it becomes necessary to allocate or assign fishing privileges among various U.S. fishermen, such allocation shall be (A) fair and equitable to all such fishermen; (B) reasonable calculated to promote conservation; and (C) carried out in such manner that no particular individual, corporation, or other entity acquires an excessive share of privileges;
5. Conservation and management measures shall, where practicable, consider efficiency in the utilization of fishery resources; except that no such measure shall have economic allocation as its sole purpose;
6. Conservation and management measures shall take into account and allow for variations among, and contingencies in, fisheries, fishery resources, and catches;
7. Conservation and management measures shall, where practicable, minimize costs and avoid unnecessary duplication;
8. Conservation and management measures shall, consistent with the conservation requirements of the Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities;
9. Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch; and,
10. Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.

The MSRA was most recently reauthorized in 2006. Two major recent sets of amendments to the law were the:

- The Sustainable Fisheries Act (1996) addresses many topics, among which includes Title V, *Implementation of Western and Central Pacific Fisheries Commission* (http://www.nmfs.noaa.gov/sfa/sustainable_fisheries_act.pdf).
- *Magnuson–Stevens Fishery Conservation and Management Reauthorization Act of 2006*, which has numerous purposes (<http://www.nmfs.noaa.gov/msa2005/index.html>):
 - a. Acting to conserve fishery resources
 - b. Supporting enforcement of international fishing agreements
 - c. Promoting fishing in line with conservation principles
 - d. Providing for the implementation of FMPs which achieve optimal yield
 - e. Developing underutilized fisheries
 - f. Protecting essential fish habitats
 - g. Additionally, the law calls for reducing bycatch and establishing fishery information monitoring systems.

The Council and the National Marine Fisheries Service (NMFS) manage U.S. Federal fisheries from three to 200 miles that encompasses the Northeast Region (federal waters from Maine to North Carolina). NOAA/NMFS is also responsible for carrying out the U.S. policies to manage and conserve marine protected resources.

Other applicable law that is directly relevant to the management of marine fisheries includes (NEFMC 2003):

- National Environmental Policy Act (NEPA): requires environmental impact assessments of federal actions and compliance with other laws and executive orders.
- Endangered Species Act (ESA): prohibits actions that are expected to jeopardize the continued existence of any endangered or threatened species under NMFS' jurisdiction or result in harmful effects on critical habitat.
- Marine Mammal Protection Act (MMPA): requires protection of marine mammals. NMFS is responsible for whales, dolphins, porpoise, seals, sea lions and fur seals. The U.S. Fish and Wildlife Service (USFWS) is responsible for walrus, sea otters, and the West Indian manatee.
- Migratory Bird Treaty Act (MBTA): a shared agreement between the United States, Canada, Japan, Mexico, and Russia to protect migratory birds, prohibiting their taking, killing, or possession. The directed take of seabirds is prohibited.
- Coastal Zone Management Act (CZMA): requires all federal activities that directly affect the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable
- Administrative Procedures Act (APA): provides for public participation in the rulemaking process
- Paperwork Reduction Act (PRA): regulates the collection of information from the public
- Regulatory Flexibility Act (RFA): requires assessment of the regulatory impact on small entities through a regulatory flexibility analysis. The analysis is combined with the regulatory impact review (RIR) and NEPA analyses.
- EO 12866 (Regulatory Planning and Review): establishes guidelines for promulgating new regulations and reviewing existing regulations and requires agencies to assess the costs and benefits of all regulatory action alternatives.
- EO 12898 (Environmental Justice): requires federal agencies to identify and address "disproportionately high adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations in the United States" as part of an environmental impact analysis associated with an action.
- EO 13175 (Consultation and Coordination with Indian Tribal Governments): requires regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications and the avoidance of unfunded mandates imposed on tribes.

- EO 13132 (Federalism): requires federal agencies to consider the implications of policies that may limit the scope of or pre-empt states' legal authority. Such actions require a consultation process with the states and may not create unfunded mandates for the states.
- EO 13186 (Responsibilities of Federal Agencies to Protect Migratory Birds): supplements the MBTA by requiring Federal agencies to work with the USFWS to develop memoranda of agreement to conserve migratory birds and to evaluate the effects of their actions on migratory birds in NEPA documents.

Under the MSRA, the Council is authorized to prepare and submit to the Secretary of Commerce for approval, disapproval or partial approval, an FMP and any necessary amendments, for each fishery under its authority that requires conservation and management. The Council conducts public hearings to allow all interested persons an opportunity to be heard in the development of FMPs and amendments, and reviews and revises, as appropriate, the assessments and specifications with respect to the optimum yield from each fishery (NEFMC 2003).

Details of the consultations leading to the formulation of the management plan

The Northeast Skate complex was assessed in November 1999 at the 30th Stock Assessment Workshop (SAW 30) in Woods hole, Massachusetts. The work completed at SAW 30 indicated that four of the seven species of skates were in an overfished condition: winter, thorny, barndoor and smooth. In addition, overfishing was thought to be occurring on winter skate (NEFMC 2003). During March 2000, NMFS informed the Council of its decision to designate the NEFMC as the responsible body for the development and management of the seven species included in the Northeast Region's skate complex. NMFS identified the need to develop an FMP to end overfishing and rebuild the resources based on the information presented at SAW 30.

The FMP was developed to address two main problems: 1) Overfishing/overfished condition of two skate species and 2) lack of adequate information (NEFMC 2003). Without this information, the Council could not take appropriate management actions to conserve the resources as necessary (NEFMC 2003). As a result, one of the main objectives of the FMP is to collect critical information for improving knowledge of skate fisheries by species, monitoring the status of skate fisheries, related markets, and the related resources, in addition to the effectiveness of management approaches (NEFMC 2003). During the development of the FMP, the Skate Plan Development Team (PDT) continued to update the status of the determinations for the skate species based on the biomass reference points used during SAW 30 (NEFMC 2003).

In order to address the lack of information and identification problems, the Council worked closely with NMFS and the Northeast Fisheries Science Center (NEFSC) to develop a species identification guide for skate fishing vessels, dealers, enforcement agents, samplers and port agents, which was distributed prior to implementation of the FMP.

To address the overfishing problem, the FMP proposed precautionary management measures to ensure that overfishing on winter skate and other skate species does not occur. (NEFMC 2003). The Northeast Skate Complex FMP was published in 2003, with several revisions as Framework Adjustments/specifications and plan amendments that are supported by the best available scientific information (NEFMC 2003).

10.1.5 Resolution of disputes

Legal disputes are handled under the Administrative Procedures Act, which governs the process by which federal agencies (e.g., NOAA/NMFS) develop and issue regulations. Opportunities are provided for the public to comment on notices of proposed rulemaking (<http://www.nmfs.noaa.gov/pr/pdfs/laws/apa.pdf>). NOAA has an extensive Dispute Resolution Process, defined by the Administrative Dispute Resolution Act of 1996, Pub. L. No. 104-320. The Council resolves disputes by majority vote as required in section 302 of the MSRA. All stakeholders have an opportunity for input prior to the decision by the Secretary of Commerce. Any disputes remaining following adoption of regulations/rules may be resolved through the federal court system.

The Council conducts its ongoing decision-making processes in a manner designed to avoid legal disputes. The Council relies on a consensus approach among advisory bodies with room for minority reports should these groups fail to reach consensus. The Council resolves disputes (after weighing staff reports, advisory body reports, NMFS legal counsel advice, and public testimony) by majority vote held in public session as required in Section 302 of the MSRA. All stakeholders have an opportunity for input prior to the decision by the Secretary of Commerce. Legal action may also be used by those individuals or groups dissatisfied with the decisions made by the Council and NMFS through the federal court system. In addition, the wide dissemination of information to promote transparency ensures that the probability of stakeholders being caught off-guard is minimal. If legal action is required, the Office of General Counsel (OGC) provides legal advice, service and counsel for all matters that may arise in the conduct of NOAA's missions. The OGC is appointed by the Secretary of Commerce, with the approval of the President (NEFMC 2020b).

10.1.6 Respect of Rights

The ten National Standards of the MSRA guide the development of fishery management plans in the U.S. The Act also requires NMFS to develop National Standard Guidelines that further interpret the National Standards and give guidance to the regional fishery management councils on how to comply with the National Standards (SCS 2018). National standard Number 8 states that: "Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of paragraph (2), in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities."

The National Standard Guidelines state that: "All other things being equal, where two alternatives achieve similar conservation goals, the alternative that provides the greater potential for sustained participation of such communities and minimizes the adverse economic impacts on such communities would be the preferred alternative." The guidelines also say that "The term "sustained participation" means continued access to the fishery within the constraints of the condition of the resource" (NOAA 2018).

The MSFCMA requires a provision in all fishery management plans to: "... assess, specify, and analyze the likely effects, if any, including the cumulative conservation, economic, and social impacts, of the conservation and management measures on, and possible mitigation measures for—

- (A) participants in the fisheries and fishing communities affected by the plan or amendment;
- (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants;"

Fishery management plans that establish a limited access system for the fishery in order to achieve optimum yield require the Council and the Secretary of Commerce to take into account—

- (A) present participation in the fishery;
- (B) historical fishing practices in, and dependence on, the fishery;
- (C) the economics of the fishery;
- (D) the capability of fishing vessels used in the fishery to engage in other fisheries;
- (E) the cultural and social framework relevant to the fishery and any affected fishing communities;
- (F) the fair and equitable distribution of access privileges in the fishery; and
- (G) any other relevant considerations.

The make-up of the regional fishery management councils and their advisory panels, together with public meetings in the region, assure that existing arrangements will be taken into account in the development of fishery management plans. These provisions of the law do not guarantee that existing legal or customary rights will be incorporated into a management plan but fishery management plans can formally commit to the legal rights

- (B) historical fishing practices in, and dependence on, the fishery;
- (C) the economics of the fishery;
- (D) the capability of fishing vessels used in the fishery to engage in other fisheries;
- (E) the cultural and social framework relevant to the fishery and any affected fishing communities;
- (F) the fair and equitable distribution of access privileges in the fishery; and
- (G) any other relevant considerations.

10.1.7 Consultation, roles, and responsibilities

Accountability and transparency of the management system is required by multiple laws and Executive Orders. The National Standard Guidelines for National Standard 2 specifically require transparency in the provision of scientific information for fishery management. Under the heading “Transparency and openness,” the NS Guidelines state that: “The Magnuson-Stevens Act provides broad public and stakeholder access to the fishery conservation and management process, including access to the scientific information upon which the process and management measures are based. Public comment should be solicited at appropriate times during the review of scientific information. Communication with the public should be structured to foster understanding of the scientific process.” They further require that: “Scientific information products should describe data collection methods, report sources of uncertainty or statistical error, and acknowledge other data limitations. Such products should explain any decisions to exclude data from analysis. Scientific products should identify major assumptions and uncertainties of analytical models. Finally, such products should openly acknowledge gaps in scientific information” (NOAA 2018, SCS 2018).

The Council’s mandate is to manage and conserve fisheries for the greatest overall benefit of the nation by relying on scientific information and data, as well as the participation of fishing communities and the public. In accordance with the MSRA, the Council has functions and responsibilities that are outlined in the Statement of Organization, Practices and Procedures (SOPP). These functions and roles are summarized below (NEFMC 2015):

- A. Prepare and submit to the Secretary of Commerce a fishery management plan with respect to each fishery requiring conservation and management within the Council’s geographic area or authority and amendments to such plan as necessary.
- B. Review and comment on applications for foreign fishings transmitted to the Council under a governing international fishery agreement.
- C. Prepare comments on any FMP or amendments prepared by the Secretary which are transmitted to the Council under Section 304 (c)(4) of the MSRA.
- D. Conduct public hearings in the Council’s membership area, to allow interested persons the opportunity to be heard in the development of FMPs and Amendments with respect to the administration and implementation of the MSRA.
- E. Submit to the Secretary such as periodic reports as the Council deems appropriate.
- F. Review and revise (as appropriate) the specifications and assessments in each FMP for each fishery within its geographical area with regard to:
 - 1. The present and probable condition of the fishery.
 - 2. The MSY from the fishery
 - 3. The optimum yield from the fishery
 - 4. The capacity and extent to which fishing vessels of the U.S. will harvest the optimum yield on an annual basis an
 - 5. The portion of such optimum yield on an annual basis which will not be harvested by fishing vessels of the U.S and can be made available for foreign fishing.
- G. Develop annual catch limits and accountability measures for each of its managed fisheries that may not exceed the recommendations established by the MSRA
- H. Conduct any other activities which are required by or provided for in the MSRA.

The Council is involved in a public process and therefore makes efforts to keep all affected parties informed about Council activities (NEFMC 2020b). The Whenever possible, the Council will use community input in conjunction with scientific information in the development of its FMPs.

For Council Meetings, the Executive Director in consultation with the Council Chairman drafts the agenda for each meeting. The Executive Committee will review the draft agenda before it is released to the public. Timely notice of each regular meeting and emergency meeting of the Council, including time, place and agenda, shall be provided by any means that will result in wide publicity in the major fishing ports of the region (and in any other fishing ports with a direct interest in the affected fishery), noting that email notifications and website postings alone are not sufficient (NEFMC 2015). Notice of each regular meeting shall also be published in the Federal Register (FR).

The FR serves as the Council’s notice of record. Meeting notices must be published for the Oversight Committee, Advisory Panel and Council meetings at least 14 days prior to the meeting date. The Council

meeting agenda is also sent to the Council's mailing list (NEFMC 2020b). The Council will not take action, except in emergency situations, if that action is not listed on the published agenda. The Council may hold public hearings in order to provide the opportunity for all interested individuals to be heard with respect to the development of fishery management plans or amendments, and with respect to the administration and implementation of other relevant features of the Act. Notice of each hearing must be received by NMFS for publication in the FR at least 23 calendar days prior to the proposed hearing. The Council will also issue notices to announce the time, location, and agenda for each hearing in a manner sufficient to assure all interested parties are aware of the opportunity to make their views known. If it is determined a hearing is appropriate, the Council Chair will designate at least one voting member of the Council to officiate. An accurate record of the participants and their views will be made available to the Council at the appropriate Council meeting and maintained as part of the Council's administrative record.

The Council's Executive Committee is responsible for developing Council meeting agendas. To ensure that issues or recommendations discussed at committee meetings will in turn be addressed at the next scheduled Council meeting, oversight committee chairmen should schedule committee meetings appropriately. Public comments are allowed at Council meetings on all agenda items requiring final action and on all agenda items at Scientific and Statistical Committee and Advisory Panel meetings. Both oral and written comments may be submitted (NEFMC 2020b). In addition, the Council website has newsletters, articles, publications, meeting agendas and calendars of upcoming events and highlights current issues.

10.1.8 Decision making process

The Council has established its process, outlined in Section 302 of the MSRA, to accomplish the work of developing rules that apply to the managed fisheries that operate in its areas of responsibility in the U.S. EEZ. There are 18 voting members and are organized as follows:

- The Regional Administrator of the Greater Atlantic Region/NOAA Fisheries, or a designee (no term limit);
- Five principal state officials with marine fishery management responsibility (or a designee) for Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut (no term limit).
- Twelve members nominated by the governors of the New England coastal states and appointed by the Secretary of Commerce for three-year terms (three consecutive terms to serve is allowable).
- In addition, four non-voting members represent the United States Coast Guard (USCG), USFWS, U.S. Department of State, and the ASMFC (NEFMC 2020).

The Council relies on its Oversight Committees, Advisory Panels, Plan Development Teams and Scientific and Statistical Committee to develop management actions.

Oversight Committees (OCs)

Each Council member serves on one or more oversight committee. Committees are related to a specific fishery or management issue, such as ecosystem-based fisheries management (EBFM). OCs allow the Council to more efficiently develop alternatives and management measures for consideration and inclusion in an FMP. Committee members develop specific measures that will form the basis of the plan, amendments or framework adjustments to an FMP. OCs make recommendations, which are forwarded to the full Council for approval before they are included in any draft of final FMP.

Advisory Panels (APs)

APs consist of members from the fishing industry (both recreational and commercial sectors), scientists, environmental advocates and others with experience and knowledge related to fisheries issues. They meet separately or jointly with the relevant OC and aid in developing management plan measures. Advisors are appointed every three years following a solicitation for candidates. The OC recommends new or returning advisors. The Council's Executive Committee provides final approval of AP members.

Plan Development Teams (PDTs)

PDTs provide additional expertise for the purpose of conducting analyses and providing technical information to the Council. The PDTs help ensure the Council FMPs, amendments and framework adjustments meet legal and scientific requirements for review and approval. They provide technical analyses concerning species-related information, and develop issue papers, alternatives, and other documents as appropriate.

Scientific and Statistical Committee (SSC)

The SSC provides the Council with scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, achieving rebuilding targets, and considerations related to the economic and social impacts of management measures (NEFMC 2020).

Figure 12 gives an overview of the Council Structure.

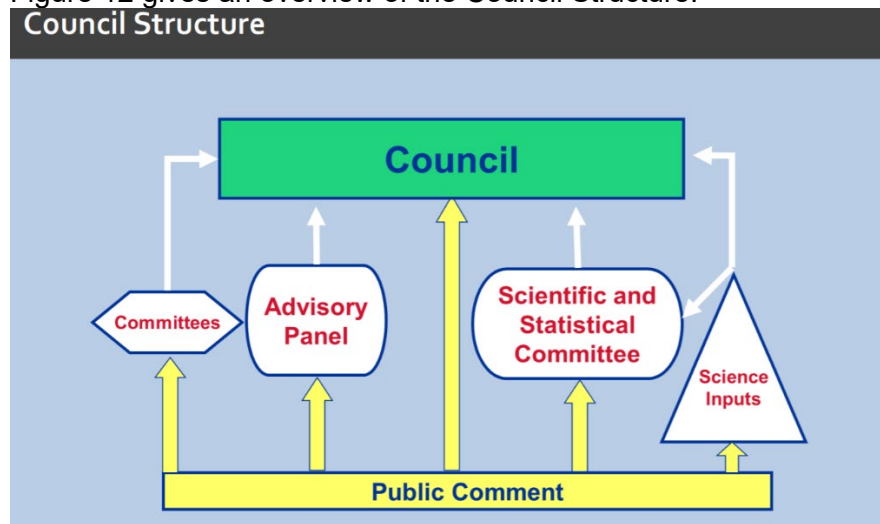


Figure 12 Council Structure NOAA 2019

10.1.9 Objectives for the Little and Winter skate fishery

To ensure the council has effective conservation and management programs in place and adheres to sound management practices as it considers and includes ecosystem-based principles in its FMPs, the Council adopted the following policy:

- The Council recognizes that allocation is an integral part of its management responsibilities and that measures which have allocative effects should be open and transparent.
- The Council will develop conservation measures and controls that have a high level of certainty that ensures they will prevent overfishing, end overfishing and rebuild stocks.
- The Council recognizes that management measures affect fishermen, and that allocation measures and controls must have a high level of certainty that ensures our conservation requirements are met in a fair and equitable manner (NEFMC 2020b).

The fishery specific objectives for the Little and Winter skate are outlined in the Northeast Skate Complex FMP and summarized below.

The overall goal of the Skate FMP is consistent with the requirements of the MSRA and other applicable laws to research and manage the Northeast skate complex at long-term sustainable levels. The Council has identified the following FMP objectives (NEFMC 2003):

1. Collect information for improving knowledge of skate fisheries by species and for monitoring: the status of the skate fisheries, resources and related markets and the effectiveness of skate management approaches.
2. Implement measure to protect the overfished species of skate (at the time, barndoor and thorny) and increase their biomass to target levels, reduce fishing mortality on winter skate and prevent overfishing of the other species in the Northeast skate complex either through skate-specific management measures, in other FMPs, or a combination of both as necessary.
3. Develop a skate permit system, coordinate data collection with state agencies for vessels fishing for skates or catching skates as bycatch only in state waters, and work with the fishing industry to establish a catch reporting system consistent with industry capabilities, including the use of study fleets.

4. Minimize bycatch and discard mortality rates for skates caught in both non-directed and directed fisheries through the promotion and encouragement of experimentation, conservation engineering and gear development.
5. Encourage and promote research for ecological, biological and fishery information based on the research needs identified in the Skate SAFE Report and scoping document, including the development and dissemination of a skate species identification guide.
6. Minimize, to the extent possible, the impacts of skate management approaches on fisheries for other species on which New England and Mid-Atlantic fishermen depend (e.g. groundfish, scallops, monkfish and fluke) recognizing the interconnected nature of skate and other fisheries in the Northeast Regions.
7. To the extent possible, manage clearnose and rosette skates separately from the other five species in the skate complex, recognizing that these two species are distributed primarily in the Mid-Atlantic and South Atlantic regions.

10.1.10 Regulatory framework and measures to meet objectives

The Code of Federal Regulations, Title 50, Chapter VI, Part 648, Subpart O states the official regulations for the Northeast skate complex in federal waters of the New England and Mid-Atlantic region. The contents of these regulations include:

§648.320 Skate FMP review and monitoring.

§648.321 Framework adjustment process.

§648.322 Skate allocation, possession, and landing provisions.

§648.323 Accountability measures.

Details of these regulations can be found at the following link: [Management measures for the NE skate complex fisheries](#).

The NEFMC developed the Skate FMP in 2003. A summary of the plan amendments, frameworks and specifications to this FMP are listed below (NEFMC 2020c):

Plan Amendments:

Amendment 7 (January 15, 2019) Under development

This Amendment is part of the Omnibus Deep-Sea Coral Amendment, which includes management area to protect coral habitat from the impacts of fishing gears, provisions to encourage further research on deep-sea corals and fisheries, and measures to facilitate future updates to coral management approaches. The Council identified final preferred alternatives at its January 2018 meeting, and the amendment document and Environmental Assessment (EA) were submitted to the NMFS.

Amendment 6 (February 7, 2020) - This Amendment is part of the Omnibus Industry-funded Monitoring (IFM) Amendment and Environmental Assessment, which standardizes the development and administration of future industry-funded monitoring programs in Council FMPs. FMPs managed by the council may include IFM to supplement existing monitoring required by the Standard Bycatch Reporting Methodology (SBRM).

Amendment 5 (January 4, 2017) Under development

This action considers establishing limited entry in the skate wing and/or bait fisheries.

Amendment 4 (June 30, 2015) – Establishes standards of precision for bycatch estimation for all Northeast Region Fisheries.

Amendment 3 (July 16, 2009) – developed by the NEFMC to rebuild overfished skate stocks, implement annual catch limits (ACLs) consistent with MSFCMA. A rebuilding plan for smooth skate and ACL and annual catch target (ACT) for the skate complex, TAL for the skate wing and bait fisheries, seasonal quotas for the bait fishery, new possession limits in season possession limit triggers were also part of this amendment.

Amendment 2 (April 9, 2018) – This action implements approved regulations for the NEFMC Omnibus Essential Fish Habitat (See Amendment 4 for Monkfish FMP for further details).

Amendment 1 (February 27, 2008) – The SBRM Amendment establishes an SBRM for all 13 Northeast Region FMPs (See Amendment 3 for Monkfish FMP for further details).

Framework Adjustments:

Framework 8 (June 13, 2019) – This framework contains proposed specifications for the 2020 and 2021 fishing years, including total allowable landings (TALs) and increase seasonal trip limits for both the wing and bait fisheries. The intent of this action is to establish appropriate catch limits for the skate fishery, while providing additional operational flexibility to fishery participants.

The Council adopted a 32,715 metric tons (mt) ABC for the skate complex based on advice from its SSC. Under the skate plan, the annual catch limit (ACL) is equal to the ABC. Deductions from the ACL are made to account for management uncertainty, projected dead discards, and projected state landings to achieve the TAL for the overall federal fishery.

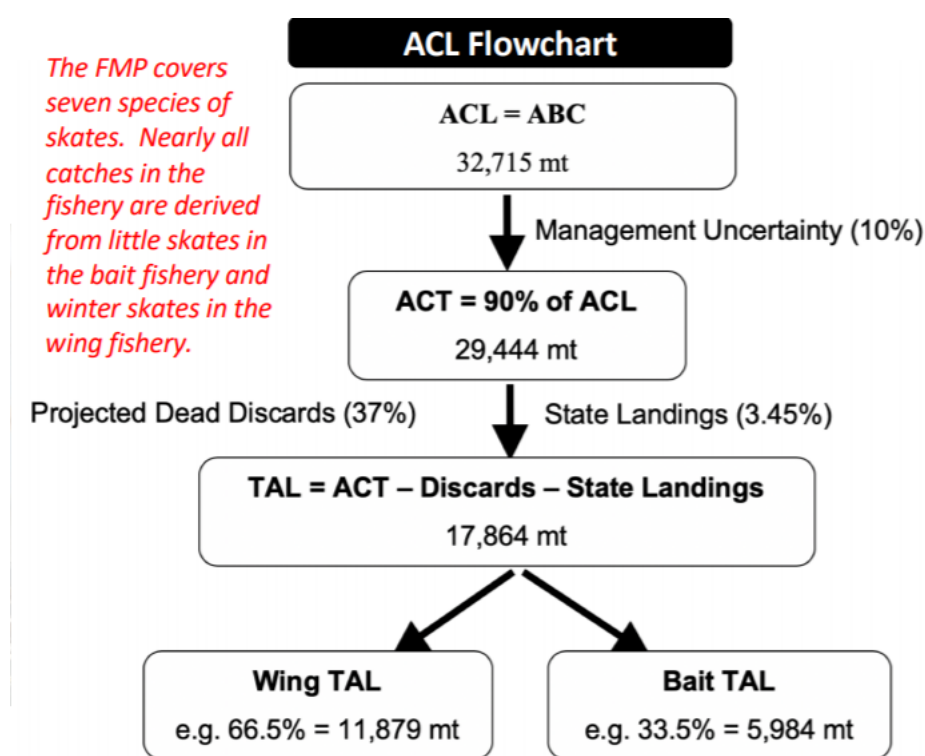


Figure 13 Skate specifications NEFMC 2020c

Framework 7 (December 8, 2016) – This framework adjustment would allow surfclam and mussel dredging under restrictive conditions in the Great South channel Habitat Management Area.

Framework 6 (February 15, 2019) – This action allows the skate wing total allowable landings to be achieved while minimizing the need to restrict fishing operations through incidental possession limits. It is intended to extend the directed fishing time for both the skate wing and bait fisheries.

Framework 5 (September 28, 2018) – This action establishes skate specifications to be consistent with the most recent scientific information and improve management of the skate fisheries. It is intended to establish appropriate catch limits for the skate fishery and to provide additional operational flexibility to fishery participants.

Framework 4 (January 3, 2018) – This rule implements measures to reduce the risk of the skate bait fishery from effectively closing down as it did in fishing year 2016. It reduces the skate bait season 3 possession limit and establishes a separate skate bait incidental possession limit.

Framework 3 (June 3, 2016) – This rule approves regulations to implement management measures, including fishing year 2016-2017 specifications, and new seasonal quota allocation for the skate wing fishery.

Framework 2 (July 23, 2014) – Approved management measures include updated skate fishery specifications for the 2014-2015 year and changes to reporting requirements.

Framework 1 (May 17, 2011) - Developed to adjust possession limits for the skate wing fishery so the TAL is taken over a longer duration in the fishing year, ensuring a steady market.

The skate fishery is managed using coastwide quotas and possession limits for the bait and wing fisheries, with different seasonal quota periods for each (Table 19). Quota changes usually occur every 1 -2 years (GARFO 2018). This fishery is also indirectly managed by limiting fishing effort through days-at-sea (DAS). The fishing season mirrors that of the NE multispecies fishery, May 1 – April 30. Individual coastal states mirror the Federal possession limits and regulations for skates. The above Plan Amendments and Framework Adjustments in the Northeast Skate Complex FMP highlight the various regulations and management measures that have changed since the initial FMP was released.

The Skate Wing Fishery

Skate wing fishermen currently are working under a 2,600-pound possession limit from May through August and a 4,100-pound limit from September through April. Framework 8 proposes to increase the possession limits to 3,000 pounds and 5,000 pounds respectively for each season and retain the 85% landings trigger for dropping down to the incidental possession limit of 500 pounds (NEFMC 2020c).

The Skate Bait Fishery

The skate bait fishery, where whole skates are landed and used for bait, is managed under a letter of authorization (LOA) program. This program exempts the owner from lower possession limits of the skate wing fishery. Any Federal skate permit holder may request a LOA from NMFS. The skate bait letter of authorization (LOA) does not exempt the participating vessel from the DAS requirements of the northeast (NE) multispecies, monkfish, or scallop fisheries, unless the vessel is fishing in a skate exemption area in Southern New England or the Mid-Atlantic. (GARFO 2018).

Vessels participating in the skate bait LOA program must meet the following requirements to qualify and remain eligible for the LOA:

- Valid LOA retained onboard the vessel at all times;
- Possession/landing of only whole skates less than 23 in total length (for bait use)
- Must be fishing on a NE multispecies, monkfish, or scallop DAS unless fishing in one of the skate exemption areas;
- Compliance with bait fishery possession limits;
- Compliance with at-sea transfer provisions, if applicable;
- Enrollment in the program for a minimum of 7 days.

Skate bait can still be landed in the skate wing fishery (without the LOA), but vessels are held to lower whole skate possession limits. The skate bait LOA exempts the vessel from the lower possession limits of the wing fishery (NOAA 2019b).

The skate bait TAL is divided into three seasons to ensure a supply of bait throughout the fishing year.

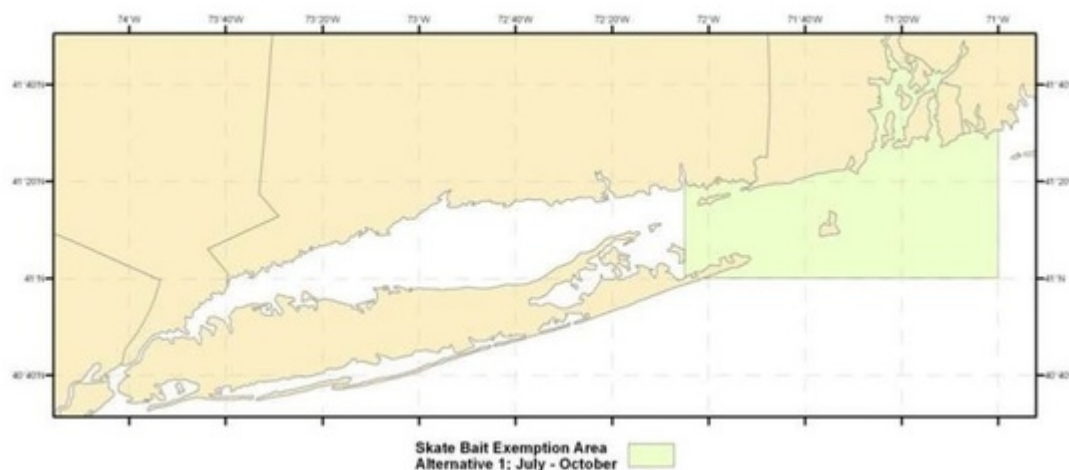
Table 20 Skate Bait Fishery Seasons and Limits NOAA 2019b.

Season	Percentage of Skate Bait Quota	Possession Limit	Trigger for In-season Adjustment	Incidental Possession Limit
1: May 1 - July 31	30.8	25,000 lb	90% of seasonal quota	8,000 lb
2: August 1 - October 31	37.1			
3: November 1 - April 30	Remainder of Skate Bait Quota	12,000 lb	80% of annual quota	

When 90 percent of the seasonal quota is landed in either Season 1 or 2, or when 80 percent of the annual skate bait quota is landed, the skate bait possession limit will be reduced to the incidental limit of 8,000 lb. If 100 percent of the skate bait quota is landed, the skate bait fishery will be closed, and active LOAs will be voided (NOAA 2019b).

Southern NE Bait Trawl Exempted Fishery

Exempted fisheries allow vessels to fish for specific species without being subject to certain NE multispecies regulations, including DAS requirements, provided the bycatch of regulated species is minimal (NOAA 2019b). A vessel may participate in the skate bait fishery, in the designated exemption area using trawl gear and does not need to be declared on a NE multispecies DAS as long as it doesn't land or possess regulated NE multispecies (groundfish). The Southern NE Skate Bait Trawl Exemption is specific to the skate bait fishery and is not available to the skate wing fishery. It also requires the skate bait LOA to participate (NOAA 2019b).

**Figure 14 Skate Bait Exemption Area NOAA 2019b.**

Marine Mammal Regulations

The skate fishery is operated in an area that also is subject to several levels of regulations that protect several endangered and other species of marine mammals. Many of the factors that are likely to mitigate the impacts of the skate fishery on protected species exist in other FMPs currently implemented in the Northeast region. In addition, the regulatory measures of the Atlantic Large Whale Take Reduction Plan (ALWTRP) and the Harbor Porpoise Take Reduction Plan (HPTRP) have been implemented in response to the ESA and MMPA concerns expressed pertaining the fishing operations taking place under the other FMPs (specifically the Spiny Dogfish, Monkfish and Multispecies FMPs) and must be adhered to for any vessel fishing for skate (NEFMC 2003). These FMPs have all undergone consultation pursuant to Section 7 of the ESA. The conclusions state that each fishery (Monkfish, Spiny Dogfish and Multispecies) is likely to

jeopardize the continued existence of the North Atlantic right whale. The Opinions required NMFS to implement a set of Reasonable and Prudent Alternatives (RPA) to remedy the jeopardy finding. The RPAs call for significant further action under the ALWTRP (NEFMC 2003).

The ALWTRP was developed by NOAA's NMFS and focuses on reducing entanglements of endangered fin, humpback, and right whales and was last modified in 2015. The RPAs called for three key regulatory changes: 1) new gear modifications; 2) implementation of a Dynamic Area Management system (DAM) of short-term closures to protect unexpected concentrations of right whales. These measures were all implemented in 2002 (NEFMC 2003).

These regulations apply to the sink gillnet fisheries that operate under the auspices of the Northeast Spiny Dogfish, Monkfish and Multispecies FMPs (NEFMC 2003). Other areas are subject to seasonal closures in which the use of sink gillnets is prohibited. Supplementary information, or Outreach Guides, are available for the trap/pot and gillnet gear types. The following summary includes the changes applicable to the gillnet fishery (NOAA 2020b).

Universal Gillnet Requirements:

- No buoy line floating at the surface
- No wet storage of gear (all gear must be hauled out of the water at least once every 30 days)
- Fishermen are encouraged to maintain knot-free buoy lines.
- All groundlines must be made of sinking line.

Gillnet Gear Marking Requirements:

- Gillnet surface buoys need to be marked with either the owner's registration number and/or the US vessel documentation number; federal commercial fishing permit number or whatever identification marking is required by the home-port state.
- When marking is not required by state or federal regulations, the letters and numbers to mark gear must be at least 1 inch in height in a color that contrasts with the buoy color.
- Buoy lines are to be marked with three 12-inch colored marks; one at the top, one at the middle and one at the bottom.

Gillnet Weak Link Requirements:

- All buoys, flotation devices and/or weights must be attached to the buoy line with a weak link with a certain breaking strength as defined for each management area.
- Individual weak links are not required in locations where rope of appropriate breaking strength is used.
- Gillnet panel weak links must be chosen from the list of NMFS approved gear, which includes off the shelf weak links, hog rings, rope of appropriate breaking strength, and other materials or devices approved in writing.

Please see the [ALWTRP Outreach guide for Northeast gillnet](#) requirements for further information. (NOAA 2020b).

The Northeast Gillnet Management Areas include: The Cape Cod Bay Restricted Area; Stellwagen Bank/Jeffreys Ledge Restricted Area; Great South Channel Restricted Gillnet Area; Other Northeast Gillnet Waters; Jeffreys Ledge Gear Marking Area and Jordan Basin Gear Marking Area (NOAA 2020b). Please refer to the [ALWTRP Outreach guide for Northeast gillnet](#) for further details, coordinates and closure information on these management areas.

The HPTRP was developed to reduce the impact of gear, including the sink gillnet gear, that has been found to entangle and kill harbor porpoise as well as other marine mammals. The measures implemented under the HPTRP include time/area closures combined with the use of acoustical devices on nets. These measures have been shown to be effective in reducing the mortality and serious injury of harbor porpoise in the sink gillnet fishery (NEFMC 2003).

10.1.11 Monitoring, control, and surveillance

Monitoring, control and surveillance (MCS) is carried out at-sea and shore-side for the federal fisheries by the NMFS Office of Law Enforcement (OLE) and the U.S. Coast Guard (USCG). NOAA's OLE protects marine wildlife and habitat by enforcing domestic laws and international treaty requirements designed to ensure these global resources are available for future generations (NOAA 2019). OLE special agents and enforcement officers ensure compliance with the nation's marine resource laws and take enforcement action when these laws are violated. All OLE work supports the core mission mandates of NOAA Fisheries—maximizing productivity of sustainable fisheries and fishing communities and protection, recovery, and conservation of protected species.

The USCG is the primary agency for at-sea fisheries enforcement. The USCG objectives are to prevent encroachment into the US EEZ, ensure compliance with domestic fisheries regulations, ensure compliance with international agreements and high seas fishing regulations. The USCG use a software package (FishTactic) to assess risk of infringements and use this enforcement tool to assist the deployment of vessels and aircraft and target fisheries enforcement effort. If the USCG detect a fisheries infringement they gather evidence and hand over the investigation to the OLE.

OLE agents/officers have the option to provide a written warning for minor offences however, these are taken into account for repeat offenders. More serious offences can be dealt with by a summary settlement, i.e. a violation which is not contested and results in a ticket which may include a discounted fine, thus allowing the violator to quickly resolve the case without incurring legal expenses. Thereafter, an offence is referred to NOAA's Office of General Counsel (OGC) for Enforcement and Litigation which can impose a sanction on the vessels permit or further refer the case to the US Attorney's Office for criminal proceedings. Penalties may range from severe monetary fines, forfeiture of catch, boat seizure and/or imprisonment. The MSA has an enforcement policy section (50 CFR 600.740) that details these "remedies for violations" (MSRA 2006).

The Council follows the same enforcement procedures outlined by NOAA Fisheries Office of Law Enforcement. There is a strong enforcement program to deter fisheries violations through successful prosecution and deterrent penalties. NOAA has authority and responsibility under more than 30 federal statutes to manage sustainable fisheries, and to protect living marine resources, including marine areas and species (NOAA Policy for Assessment of Penalties and Permit Sanctions – March 16, 2011, 56pp). Officers and agents in the NOAA Office of Law Enforcement, the US Coast Guard, Customs and Border Protection, Immigration and Customs Enforcement, US Fish and Wildlife Service, and State officers authorized under Cooperative Enforcement Agreements, monitor compliance and investigate potential violations of the statutes and regulations enforced by NOAA. Monitoring, control and surveillance are carried out across the fishing sectors to ensure observance of regulatory and statute requirements. Monitoring, control and surveillance actions include:

- Fishing permit requirements
- Fishing permit and fishing vessel registers
- Vessel and gear marking requirements
- Fishing gear and method restrictions
- Reporting requirements for catch, effort, and catch disposition
- Vessel inspections
- Record keeping requirements
- Auditing of licensed fish buyers
- Control of transshipment
- Monitored unloads of fish
- Information management and intelligence analysis
- Analysis of catch and effort reporting and comparison with landing and trade data to confirm accuracy
- Boarding and inspection by fishery officers at sea
- Aerial and surface surveillance

The Cooperative Enforcement Program is a partnership with the federal and state agencies that increases the enforcement activities and promotes compliance with federal laws and regulations. The program uses two main tools:

1. Cooperative Enforcement Agreements – authorize state and US territorial marine conservation law enforcement officers to enforce federal laws and regulations.
2. Joint Enforcement Agreement – include formal operations plan that transfers funds to state and US territorial law enforcement agencies to perform law enforcement services in support of federal regulations (NOAA 2018 OLE).

The Code of Federal Regulations list the sanctions to deal with non-compliance. Penalties for fisheries related violations include fines; permit cancellations or suspensions, permanent prohibitions on participation in the fishery, forfeiture of fish, vessels, other property and quota; and imprisonment. With respect to permit sanctions, where applicable, the statutes that NOAA enforces generally provide broad authority to suspend or revoke permits.

Reporting Requirements for Winter and Little Skate

Any vessel owner or operator that has been issued a Federal skate permit must maintain on board the vessel and submit Vessel Trip Reports (VTRs). VTRs must be received 15 days after the end of the reporting month, and weekly for vessels fishing on a NE multispecies permit (by Tuesday of the week after the fishing trip has ended) (GARFO 2018). For vessels not holding a limited access Northeast (NE) multispecies permit, VTRs must be received by NMFS or postmarked within 15 days after the end of the reporting month. Copies of VTRs must be retained on board the vessel for 1 year after the date of the last entry on the log (GARFO 2018).

The approved Framework 2 (July 2014) to the Northeast Skate Complex FMP required more specific reporting requirements for skates. Skates must be identified by species, and vessels are no longer permitted to report landing as ‘unclassified’ skates (NEFMC 2020; GARFO 2018). Skates must be identified according to the following categories: Winter skate; little skate; little/winter skate; barndoor skate; smooth skate; thorny skate; clearnose skate; or rosette skate (GARFO 2018). All discards of skates must be reported according to two size classes: Large (greater or equal to 23in. length) and small (less than 23in. length).

There are no VMS or observer requirements for skates, however vessels must abide by NE multispecies, scallop, or monkfish regulations if fishing on a Days-at-Sea (DAS) for one of those fisheries (GARFO 2018). All federally permitted vessels are obligated to carry an observer if randomly selected by the National Observer Program (GARFO 2018).

10.1.12 Management evaluation

Details of any planned education and training for interest groups

The Council provides a range of opportunities for stakeholder education and input into management required by federal statute and implemented through its standard operating procedures (NEFMC 2020). Descriptions of stakeholder consultation procedures available on the Council website identify several elements of Council procedures that enable the distribution of information to stakeholders and the provision of public comment to management.

The NEFSC Cooperative Research Branch will host two summits in the spring of 2020: one summit in New England and the other in Virginia. The goals of the NE Cooperative Research Summits are: 1) communicate and coordinate cooperative research efforts in the NE region; 2) develop best practices for applying cooperative research results to stock assessments and management; 3) develop priorities for near-term science and management challenges that can be addressed by cooperative research; and 4) open opportunities for new collaborations between fishermen, scientist and other research partners (NOAA 2020).

In addition, NOAA fisheries periodically offers classroom-style training for education on the MSRA fishery management process. The training covers a number of important topics, including the MSRA, Administrative Procedure Act, Data Quality Act, Executive Order 12866 – Regulatory Planning and Review,

Freedom of Information Act, Paperwork Reduction Act, Regulatory Flexibility Act, National Environmental Policy Act, Endangered Species Act, Marine Mammal Protection Act, Essential Fish Habitat, and state-federal issues (NOAA 2018b). No training or planned education was found for the 2020-2021 period.

Date of the next review and audit of the management plan

Internal Review

Northeast Skate Complex Annual Monitoring Report is produced annually due to the regulations implementing the management measures for the Northeast Skate Complex Fisheries, which states that *the Skate PDT shall meet at least annually to review the status of the species in the skate complex. At a minimum, this review shall include annual updates to survey indices, fishery landings and discards; a re-evaluation of stock status based on the updated survey indices and the FMP's overfishing definitions; and a determination of whether any of the accountability measures (AMs) specified under §648.323 were triggered. The review shall also include an analysis of changes to other FMPs (e.g., Northeast Multispecies, Monkfish, Atlantic Scallops, etc.) that may impact skate stocks, and describe the anticipated impacts of those changes on the skate fishery* (NEFMC 2019).

Decisions related to the FMP for the Northeast skate complex are reviewed and produced as part of ongoing meetings and collaboration between oversight committees and their advisory panels. The Northeast Skate Complex Committee and the Northeast Skate Complex Advisory Panel continue to review and update the FMP. There are several meetings scheduled for the 2020 year, including a Joint Advisory and Committee meeting a PDT meeting.

External Review

As part NOAA's ongoing improvement efforts, a systematic peer review process began in 2013 at all six of the regional science centers and at the headquarters Office of Science and Technology. Experts from within and outside the agency carefully examine science programs on a 5-year peer review cycle to improve integration, identify best practices, and share successes and challenges. The review process includes opportunities for public involvement, which will be part of our broader dialog with fishery management councils, fishing industry, and other stakeholders (NOAA 2018c).

All Council recommendations are reviewed by NMFS, NOAA, and the Department of Commerce, and NOAA. OGC reviews proposed actions to assure compliance with the MSRA. The Center for Independent Experts periodically reviews the skate management and stock assessments. Further external review occurs through occasional legal challenges, which refine understanding of requirements under laws and regulations.

However, the fishery specific management system specifically for the Northeast Skate Complex is not externally reviewed according to personal communication with NOAA and GARFO. The MSC GSA4.10.1 defines 'external review' as *external to the fisheries management system, but not necessarily international. Depending on the scale and intensity of the fishery, it could be by:*

- *Another department within an agency;*
- *Another agency or organization within the country;*
- *A government audit that is external to the fisheries management agency;*
- *A peer organization nationally or internationally, and*
- *External expert reviewers.*

10.2 Principle 3 Performance Indicator scores and rationales

PI 3.1.1 – Legal and/or customary framework

PI 3.1.1		The management system exists within an appropriate legal and/or customary framework which ensures that it:		
		<ul style="list-style-type: none"> - Is capable of delivering sustainability in the UoA(s); - Observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and - Incorporates an appropriate dispute resolution framework 		
Scoring Issue		SG 60	SG 80	SG 100
a	Compatibility of laws or standards with effective management			
	Guide post	There is an effective national legal system and a framework for cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2	There is an effective national legal system and organised and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with MSC Principles 1 and 2.	There is an effective national legal system and binding procedures governing cooperation with other parties which delivers management outcomes consistent with MSC Principles 1 and 2.
	Met?	Yes	Yes	Yes
Rationale				

Management of the Little and Winter skate fisheries is carried out under the authority of the federal Magnuson-Stevens Fishery Conservation and Management Act (MSA), first passed in 1976 and most recently reauthorized in 2006. The MSA is the principal law governing the harvest of fishery resources within the federal portion of the U.S. 200-mile zone. The MSA, or MSRA, contains ten National Standards with which all fishery management plans (FMPs) must conform and which guide fishery management (NPFMC 2018a; 2018b). Under the MSRA, the NEFMC recommends management actions to the National Marine Fisheries Service (NMFS) for approval. In addition to the MSRA, the Council adheres to a suite of “other applicable laws:” the National Environmental Policy Act (NEPA), the Endangered Species Act (ESA), the Marine Mammal Protection Act (MMPA), the Migratory Bird Treaty Act (MBTA); the Administrative Procedure Act (APA), Paperwork Reduction Act (PRA); Regulatory Flexibility Act (RFA); Coastal Zone Management Act (CZMA); and other relevant U.S. laws, Executive Orders and regulations. Because there are instances in which federal regulations also apply in state waters, the Council coordinates with the Atlantic States Marine Fisheries Commission (ASMFC) to manage some species, in addition to working directly with each state represented on the Council (NEFMC 2020).

The Council relies on a consensus approach among advisory bodies with room for minority reports should these groups fail to reach consensus (NEFMC 2020). The Council resolves disputes (after weighing staff reports, advisory body reports, NMFS legal counsel advice, and public testimony) by majority vote held in public session as required in Section 302 of the MSRA. All stakeholders have an opportunity for input prior to the decision by the Secretary of Commerce. Legal action may also be used by those individuals or groups dissatisfied with the decisions made by the Council and NMFS through the federal court system.

Therefore, it is concluded that there is an effective legal system and binding procedures governing cooperation with other parties which delivers management outcomes consistent with MSC Principles 1 and 2, thereby meeting the SG 60, 80 and 100.

Resolution of disputes				
b	Guide post	The management system incorporates or is subject by law to a mechanism for the resolution of legal disputes arising within the system.	The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective in dealing with most issues and that is appropriate to the context of the UoA.	The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective .
	Met?	Yes	Yes	Yes
Rationale				

Legal disputes are handled under the Administrative Procedures Act, which governs the process by which federal agencies (e.g., NOAA/NMFS) develop and issue regulations. Opportunities are provided for the public to comment on notices of proposed rulemaking (<http://www.nmfs.noaa.gov/pr/pdfs/laws/apa.pdf>). NOAA has an extensive Dispute Resolution Process, defined by the Administrative Dispute Resolution Act of 1996, Pub. L. No. 104-320. The Council resolves disputes by majority vote as required in section 302 of the MSRA. All stakeholders have an opportunity for input prior to the decision by the Secretary of Commerce. Any disputes remaining following adoption of regulations/rules may be resolved through the federal court system. The MSRA requires discussions and decisions to take place in public sessions using publicly available information, which ensures transparency in the process and is appropriate to the context of the fishery.

Therefore, it is concluded that the management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective, thereby meeting the SG 60, 80 and 100.

Respect for rights				
c	Guide post	The management system has a mechanism to generally respect the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to observe the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.	The management system has a mechanism to formally commit to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2.
	Met?	Yes	Yes	Yes
Rationale				

The ten National Standards of the MSRA guide the development of fishery management plans in the U.S. The Act also requires NMFS to develop National Standard Guidelines that further interpret the National Standards and give guidance to the regional fishery management councils on how to comply with the

National Standards (SCS 2018). National standard Number 8 states that: “Conservation and management measures shall, consistent with the conservation requirements of this Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that meet the requirements of paragraph (2), in order to (A) provide for the sustained participation of such communities, and (B) to the extent practicable, minimize adverse economic impacts on such communities.”

The National Standard Guidelines state that: “All other things being equal, where two alternatives achieve similar conservation goals, the alternative that provides the greater potential for sustained participation of such communities and minimizes the adverse economic impacts on such communities would be the preferred alternative.” The guidelines also say that “The term “sustained participation” means continued access to the fishery within the constraints of the condition of the resource” (NOAA 2018).

The MSRA requires a provision in all fishery management plans to: “... assess, specify, and analyze the likely effects, if any, including the cumulative conservation, economic, and social impacts, of the conservation and management measures on, and possible mitigation measures for—

- (A) participants in the fisheries and fishing communities affected by the plan or amendment;
- (B) participants in the fisheries conducted in adjacent areas under the authority of another Council, after consultation with such Council and representatives of those participants;...”

Fishery management plans that establish a limited access system for the fishery in order to achieve optimum yield require the Council and the Secretary of Commerce to take into account—

- (A) present participation in the fishery;
- (B) historical fishing practices in, and dependence on, the fishery;
- (C) the economics of the fishery;
- (D) the capability of fishing vessels used in the fishery to engage in other fisheries;
- (E) the cultural and social framework relevant to the fishery and any affected fishing communities;
- (F) the fair and equitable distribution of access privileges in the fishery; and
- (G) any other relevant considerations.

The make-up of the regional fishery management councils and their advisory panels, together with public meetings in the region, assure that existing arrangements will be taken into account in the development of fishery management plans. These provisions of the law do not guarantee that existing legal or customary rights will be incorporated into a management plan but fishery management plans can formally commit to the legal rights(B) historical fishing practices in, and dependence on, the fishery;

- (C) the economics of the fishery;
- (D) the capability of fishing vessels used in the fishery to engage in other fisheries;
- (E) the cultural and social framework relevant to the fishery and any affected fishing communities;
- (F) the fair and equitable distribution of access privileges in the fishery; and
- (G) any other relevant considerations.

Therefore, it is concluded that the management systems have formally committed to the legal rights created explicitly or established by custom of people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2, thereby meeting the SG 60, 80 and 100.

References

NEPMC 2020; NOAA 2018; MSRA, 2007; SCS 2018

[Draft scoring range and information gap indicator added at Announcement Comment Draft Report](#)

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	100
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Condition number (if relevant)

N/A

PI 3.1.2 – Consultation, roles and responsibilities

PI 3.1.2		The management system has effective consultation processes that are open to interested and affected parties The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties		
Scoring Issue		SG 60	SG 80	SG 100
a	Roles and responsibilities			
	Guide post	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood .	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction.	Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction.
	Met?	Yes	Yes	Yes
Rationale				

The MSRA and amendments to the MSRA, in addition to other relevant Acts, mandate that the functions, roles and responsibilities are well understood and explicitly defined for key areas of responsibility and interaction. Under the MSRA, the Council recommends management actions to the NMFS for approval. Ultimate decision authority is placed with the Secretary of Commerce. Such measures are implemented by NMFS and enforced by the NOAA Office of Law Enforcement, and the U.S. Coast Guard.

The New England Fishery Management Council (NEFMC or Council) is one of eight regional councils established by the MSRA to manage fisheries between the 3 -200-mile limit off the coasts of Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut (NEFMC 2020). The management authority of the Council extends to the Gulf of Maine, Georges Bank, and southern New England, and overlaps with the Mid-Atlantic Council for some species in that region (NEFMC 2020).

The Council has established its process, outlined in Section 302 of the MSRA, to accomplish the work of developing rules that apply to the managed fisheries that operate in its areas of responsibility in the U.S. EEZ. There are 18 voting members and are organized as follows:

- The Regional Administrator of the Greater Atlantic Region/NOAA Fisheries, or a designee (no term limit);
- Five principal state officials with marine fishery management responsibility (or a designee) for Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut (no term limit).
- Twelve members nominated by the governors of the New England coastal states and appointed by the Secretary of Commerce for three-year terms (three consecutive terms to serve is allowable).
- In addition, four non-voting members represent the United States Coast Guard (USCG), USFWS, U.S. Department of State, and the ASMFC (NEFMC 2020).

The Council's mandate is to manage and conserve fisheries for the greatest overall benefit of the nation by relying on scientific information and data, as well as the participation of fishing communities and the public. In accordance with the MSRA, the Council has functions and responsibilities that are outlined in the

Statement of Organization, Practices and Procedures (SOPP). These functions and roles are summarized below (NEFMC 2015):

- I. Prepare and submit to the Secretary of Commerce a fishery management plan with respect to each fishery requiring conservation and management within the Council's geographic area or authority and amendments to such plan as necessary.
- J. Review and comment on applications for foreign fishing transmitted to the Council under a governing international fishery agreement.
- K. Prepare comments on any FMP or amendments prepared by the Secretary which are transmitted to the Council under Section 304 (c)(4) of the MSRA.
- L. Conduct public hearings in the Council's membership area, to allow interested persons the opportunity to be heard in the development of FMPs and Amendments with respect to the administration and implementation of the MSRA.
- M. Submit to the Secretary such as periodic reports as the Council deems appropriate.
- N. Review and revise (as appropriate) the specifications and assessments in each FMP for each fishery within its geographical area with regard to:
 - 6. The present and probable condition of the fishery.
 - 7. The MSY from the fishery
 - 8. The optimum yield from the fishery
 - 9. The capacity and extent to which fishing vessels of the U.S. will harvest the optimum yield on an annual basis an
 - 10. The portion of such optimum yield on an annual basis which will not be harvested by fishing vessels of the U.S and can be made available for foreign fishing.
- O. Develop annual catch limits and accountability measures for each of its managed fisheries that may not exceed the recommendations established by the MSRA
- P. Conduct any other activities which are required by or provided for in the MSRA.

The Council relies on its Oversight Committees (OCs), Advisory Panels (APS), Plan Development Teams (PDTs) and Scientific and Statistical Committee (SSC) to develop management actions. The SSC is required by the MSRA to provide scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, achieving rebuilding targets, and considerations related to the economic and social impacts of management measures (NEFMC 2020). Section 10.1.8 gives further details on these roles and how the OCs, APs, PDTs and the SSC contribute to the overall management process.

Therefore, it is concluded that organizations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction, meeting the SG 60, 80 and 100 for all UoAs.

Consultation processes				
b	Guide post	The management system includes consultation processes that obtain relevant information from the main affected parties, including local knowledge, to inform the management system.	The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained.	The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information and explains how it is used or not used.
	Met?	Yes	Yes	Yes

Rationale

NOAA/NMFS has several processes that regularly seek and accept relevant information, including local knowledge. NOAA Fisheries partners with federal agencies and federally recognized tribes to advise and collaborate on activities that might impact endangered and threatened species, marine mammals, and important marine habitats. NMFS has also developed a Public Consultation Tracking System (PCTS), which is an information management system covering NMFS (NOAA Fisheries) consultations under the ESA and under the MSFCMA sections 305(b)(2) & 305(b)(4) EFH. Information is publicly available that explains how information and management decisions are made, consultations with the various agencies and inter-agency sectors, council representation, etc. The Council meets five times a year according to a pre-announced schedule. Notice of meetings is made through the Federal Register. Meeting agendas are widely distributed before each meeting and accessible on the Council's website. Most Council meetings take eight days, with individual advisory body meetings occurring during the course of the week. All meetings are open to the public, except for a short-closed Council session in which the Council deals with personnel, administrative, or litigation issues. Additionally, before adopting any fishery management plan or regulation, NMFS notifies the public through the Federal Register of proposed actions and provides an opportunity for public comment. Final rules include responses to public comments, explaining how input was used.

Participation				
C	Guide post		The consultation process provides opportunity for all interested and affected parties to be involved.	The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement.
	Met?		Yes	Yes
Rationale				

The Council maintains web sites that provide information to the public on all council activities and meetings. In addition, the councils maintain contact lists of interested parties to whom they send notices of meetings and information relevant to upcoming actions. Interested and affected parties can attend council meetings in person or by way of conference calls and webinars.

There are several other procedures that promote the engagement of stakeholders, including consultation among agencies, universities and stakeholders on needed research and scientific information, public review and comment of data and analysis, public attendance and comment periods at advisory body meetings, representation on advisory bodies and the Council, Council newsletter, blogpost, twitter feed, public review periods for regulations and FMP amendments, agency responses to review comments, and opportunity for legal challenges to Council actions.

It is concluded that the consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement; and therefore, meets the SG 60, 80 and 100 level for all UoAs.

References

MSRA 2007, NEFMC 2020, NEFMC 2020b, NEFMC 2015.

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	100
Condition number (if relevant)	N/A

PI 3.1.3 – Long term objectives

PI 3.1.3		The management policy has clear long-term objectives to guide decision-making that are consistent with MSC Fisheries Standard, and incorporates the precautionary approach		
Scoring Issue		SG 60	SG 80	SG 100
a	Objectives			
	Guide post	Long-term objectives to guide decision-making, consistent with the MSC Fisheries Standard and the precautionary approach, are implicit within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Fisheries Standard and the precautionary approach are explicit within management policy.	Clear long-term objectives that guide decision-making, consistent with MSC Fisheries Standard and the precautionary approach, are explicit within and required by management policy.
	Met?	Yes	Yes	Yes
Rationale				

The MSRA, National Standards and other legislation include explicit, well-defined short- and long-term objectives for sustainable fishing and conservation. NMFS incorporated precautionary concepts to ensure compliance with the Sustainable Fisheries Act 1996, which includes 10 National Standards for conservation and management of fisheries in the U.S. The National Standards for fishery management and the National Standard Guidelines require that: “The fishing mortality rate does not jeopardize the capacity of a stock or stock complex to produce MSY.” The national standards are further interpreted through the National Standard Guidelines, required by the MSFCMA/MSRA and developed and published by NMFS. The National Standard Guidelines for National Standard 1 require that: “when specifying limits and accountability measures intended to avoid overfishing and achieve sustainable fisheries, Councils must take an approach that considers uncertainty in scientific information and management control of the fishery. These guidelines describe how to address uncertainty such that there is a low risk that limits are exceeded.” Since 2007, the MSFCMA/MSRA has required that all FMPs include catch limits and accountability measures that are intended to ensure that overfishing cannot reduce a stock below the level that will produce MSY on a continuing basis.

These provisions of law and policy are consistent with the MSC fisheries standard and the precautionary approach. They are explicit and required by management policy.

The NEFMC’s, or the Council, mandate is to manage and conserve fisheries for the greatest overall benefit of the nation by relying on scientific information and data, as well as the participation of fishing communities and the public. To ensure the council has effective conservation and management programs in place and adheres to sound management practices as it considers and includes ecosystem-based principles in its FMPs, the Council adopted the following policy:

- The Council recognizes that allocation is an integral part of its management responsibilities and that measures which have allocative effects should be open and transparent.
- The Council will develop conservation measures and controls that have a high level of certainty that ensures they will prevent overfishing, end overfishing and rebuild stocks.
- The Council recognizes that management measures affect fishermen, and that allocation measures and controls must have a high level of certainty that ensures our conservation requirements are met in a fair and equitable manner (NEFMC 2020b).

Therefore, the Little and Winter skate fisheries meet the requirements of SG100.

References

NEFMC 2020, NEFMC 202b, NOAA 2018, SCS 2018, MSRA 2007

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	100
Condition number (if relevant)	N/A

PI 3.2.1 – Fishery-specific objectives

PI 3.2.1		The fishery-specific management system has clear, specific objectives designed to achieve the outcomes expressed by MSC's Principles 1 and 2		
Scoring Issue		SG 60	SG 80	SG 100
a	Objectives			
	Guide post	Objectives , which are broadly consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are implicit within the fishery-specific management system.	Short and long-term objectives , which are consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery-specific management system.	Well defined and measurable short and long-term objectives , which are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, are explicit within the fishery-specific management system.
	Met?	Yes	Yes	No
Rationale				

Fishery specific objectives for the Little and Winter skate are outlined in the Northeast Skate Complex FMP and summarized below.

The overall goal of the Skate FMP is consistent with the requirements of the MSRA and other applicable laws to research and manage the Northeast skate complex at long-term sustainable levels. The Council has identified the following FMP objectives (NEFMC 2003):

1. Collect information for improving knowledge of skate fisheries by species and for monitoring: the status of the skate fisheries, resources and related markets and the effectiveness of skate management approaches.
2. Implement measure to protect the overfished species of skate (at the time, barndoor and thorny) and increase their biomass to target levels, reduce fishing mortality on winter skate and prevent overfishing of the other species in the Northeast skate complex either through skate-specific management measures, in other FMPs, or a combination of both as necessary.
3. Develop a skate permit system, coordinate data collection with state agencies for vessels fishing for skates or catching skates as bycatch only in state waters, and work with the fishing industry to establish a catch reporting system consistent with industry capabilities, including the use of study fleets.
4. Minimize bycatch and discard mortality rates for skates caught in both non-directed and directed fisheries through the promotion and encouragement of experimentation, conservation engineering and gear development.
5. Encourage and promote research for ecological, biological and fishery information based on the research needs identified in the Skate SAFE Report and scoping document, including the development and dissemination of a skate species identification guide.
6. Minimize, to the extent possible, the impacts of skate management approaches on fisheries for other species on which New England and Mid-Atlantic fishermen depend (e.g. groundfish, scallops, monkfish and fluke) recognizing the interconnected nature of skate and other fisheries in the Northeast Regions.
7. To the extent possible, manage clearnose and rosette skates separately from the other five species in the skate complex, recognizing that these two species are distributed primarily in the Mid-Atlantic and South Atlantic regions.

Many of the factors that are likely to mitigate the impacts of the skate fishery on protected species exist in other FMPs currently implemented in the Northeast region. In addition, the regulatory measures of the Atlantic Large Whale Take Reduction Plan (ALWTRP) and the Harbor Porpoise Take Reduction Plan (HPTRP) have been implemented in response to the ESA and MMPA concerns expressed pertaining the fishing operations taking place under the other FMPs (specifically the Spiny Dogfish, Monkfish and Multispecies FMPs) and must be adhered to for any vessel fishing for skate (NEFMC 2003). In addition, most of the species of skates in the Northeast Skate Complex that were previously classified as overfished are no longer overfished, including barndoor, which was declared rebuilt in 2016, and Smooth skate, which is in year 7 of a 10-year plan (NOAA 2019). The only skate species in the Northeast Skate Complex that remains classified as overfished is the thorny skate and this species is in year 14 of a 25-year plan (NOAA 2019).

It was stated in the Skate Advisory Panel Meeting (September 2020) that more research is needed to understand why the biomass of the thorny skate has remained low and that discard mortality rates for several species and gear types are assumed based on just one research project and needs more work (NEFMC 2020d). Because there are clear short and long-term objectives consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, and that are explicit within the fishery-specific management system, the SG80 level is met. However, due to the uncertainty of one of the species managed by the Northeast Skate Complex FMP, it cannot be said with a high degree of certainty that these objectives are demonstrably effective at achieving the outcomes expressed by MSC's Principles 1 and 2. The SG100 level is not met.

References

NEFMC 2003, NOAA 2020b, NOAA 2019, NEFMC 2020d

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
Information gap indicator	Information sufficient to score PI

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	80
Condition number (if relevant)	N/A

PI 3.2.2 – Decision-making processes

PI 3.2.2		The fishery-specific management system includes effective decision-making processes that result in measures and strategies to achieve the objectives, and has an appropriate approach to actual disputes in the fishery		
Scoring Issue		SG 60	SG 80	SG 100
a	Decision-making processes			
	Guide post	There are some decision-making processes in place that result in measures and strategies to achieve the fishery-specific objectives.	There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives.	
	Met?	Yes	Yes	
Rationale				

Decision-making for Little and Winter skate occurs primarily within the Council process. However, NMFS, the states of Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut, and numerous industry, academic, and NGO stakeholders participate in the process. The management authority of the Council extends to the Gulf of Maine, Georges Bank, and southern New England, and overlaps with the Mid-Atlantic Council for some species in that region (NEFMC 2020).

The Council has established its process, outlined in Section 302 of the MSRA, to accomplish the work of developing rules that apply to the managed fisheries that operate in its areas of responsibility in the U.S. EEZ. There are 18 voting members and are organized as follows:

- The Regional Administrator of the Greater Atlantic Region/NOAA Fisheries, or a designee (no term limit);
- Five principal state officials with marine fishery management responsibility (or a designee) for Maine, New Hampshire, Massachusetts, Rhode Island and Connecticut (no term limit).
- Twelve members nominated by the governors of the New England coastal states and appointed by the Secretary of Commerce for three-year terms (three consecutive terms to serve is allowable).
- In addition, four non-voting members represent the United States Coast Guard (USCG), USFWS, U.S. Department of State, and the ASMFC (NEFMC 2020).
-

The Council also relies on its Oversight Committees, Advisory Panels, Plan Development Teams and Scientific and Statistical Committee to develop management actions.

The SG 80 is met for this scoring indicator.

Responsiveness of decision-making processes				
b	Guide post	Decision-making processes respond to serious issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and	Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and	Decision-making processes respond to all issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the

		take some account of the wider implications of decisions.	adaptive manner and take account of the wider implications of decisions.	wider implications of decisions.
	Met?	Yes	Yes	No
Rationale				

The NEFMC and NMFS have processes in place to respond to issues identified in relevant research, monitoring, evaluation and consultation. Framework adjustments, specifications and plan amendments are implemented based on these monitoring efforts and for both fisheries. The framework adjustments are used to incorporate strategies in response to the evaluations for rebuilding plans, fishery conditions and operations. The Council, the Skate Advisory Panel and the Skate Committee monitor the status of the fishery and the skate resources and review the need to adjust the regulatory framework implemented in the FMP on a regular basis (NEFMC 2020c). Catches, indices, surveys and size frequencies are monitored annually. These are reported and incorporated into the FMP TAL setting process (section 10.1.10.).

Regulatory measures of the Atlantic Large Whale Take Reduction Plan (ALWTRP) and the Harbor Porpoise Take Reduction Plan (HPTRP) have been implemented in response to the ESA and MMPA concerns expressed pertaining the fishing operations taking place under the other FMPs (specifically the Spiny Dogfish, Monkfish and Multispecies FMPs) and must be adhered to for any vessel fishing for skate (NEFMC 2003). These FMPs have all undergone consultation pursuant to Section 7 of the ESA. The conclusions state that each fishery (Monkfish, Spiny Dogfish and Multispecies) is likely to jeopardize the continued existence of the North Atlantic right whale. The Opinions required NMFS to implement a set of Reasonable and Prudent Alternatives (RPA) to remedy the jeopardy finding. The RPAs call for significant further action under the ALWTRP (NEFMC 2003). The RPAs called for three key regulatory changes: 1) new gear modifications; 2) implementation of a Dynamic Area Management system (DAM) of short-term closures to protect unexpected concentrations or right whales. These measures were all implemented in 2002 (NEFMC 2003). According to the 2017 Atlantic Large Whale Entanglement Report, three humpback whales were reported entangled in some sort of net or mesh, and one of those was directly linked to the sink gillnet fishery (NOAA 2017). Out of those 3 entanglement incidents, only one was reported a serious mortality. The stock of humpback whales in the Northeast Atlantic region has been removed from the ESA list, so these measures appear to be effective. No entanglements of the critically endangered North Atlantic Right whale were implicated to the gillnet fishery (NOAA 2017). This supports that there are decision-making processes in place that respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation.

In the 2020 Skate-Annual Monitoring report, several FMPs were reviewed that may have an impact on the skate stocks. The Spiny Dogfish FMP will have a quota increase over the three-year specification period, where skates account for about a third of the discards in the fixed sink gill net gear (mostly winter and little skate, which could have an impact on the TAL calculations for the skate fishery. Winter and Little skate are also caught as non-target species in substantial amounts in the longfin squid fishery and skates were noted to be negatively impacted by Amendment 20, even with any reductions in latent effort. Winter and Little skate are commonly caught on observed commercial trips targeting summer flounder, scup and black sea bass, thus the Allocation Amendment for Summer Flounder, Scup, Black Sea Bass FMP could impact the skate resource if more skates (a non-target species) are discarded (NEFMC 2020e).

In summary, there is evidence that the decision-making processes respond to serious and important issues, however it is unclear if the decision-making process responds to **all** the issues identified in research, monitoring and evaluation, specifically the impact from other managed fisheries in the region. The SG 60 and 80 level are met, but the SG100 level is not met for all UoAs.

c	Use of precautionary approach			
	Guide post		Decision-making processes use the	

			precautionary approach and are based on best available information.	
	Met?		Yes	
Rationale				

The NEFMC operate under the MSFCMA and the National Standard Guidelines. National Standard 2 states that “conservation and management measures shall be based upon the best scientific information available.” The National Standard Guidelines specify that: “Scientific information that is used to inform decision making should include an evaluation of its uncertainty and identify gaps in the information. Management decisions should recognize the biological (e.g., overfishing), ecological, sociological, and economic (e.g., loss of fishery benefits) risks associated with the sources of uncertainty and gaps in the scientific information.” The councils’ Statistical and Scientific Committees (SSCs) are responsible for developing acceptable biological catch (ABC) recommendations for the councils. The National Standard Guidelines for National Standard 2 state that: “The SSC is expected to take scientific uncertainty into account when making its ABC recommendation (§600.310(f)(4)).”

The 2019 – 2020 Skate specifications is an action developed by the Council pursuant to the provisions of the Northeast Skate Complex Fishery Management Plan. The catch limits are supported by the best available scientific information. The objective listed in the FMP are also precautionary, implementing measures *to protect the overfished species of skate and increases their biomass to target levels, reduce fishing mortality on Winter skate and prevent overfishing of the other species in the Northeast skate complex either through skate-specific management measures, in other FMPs or a combination of both as necessary.*

NEFMC reports that the only species in the complex that remains in an overfished condition is thorny skate, and overfishing is not occurring on any of the seven skate species. The thorny skate stock is 16 years into a 25-year rebuilding plan and possession of the species remains prohibited until the stock is rebuilt (NOAA 2020c). The directed wing and bait fisheries are also managed in separate seasons to allow closer monitoring and management of the harvest. For the Skate Complex, the scientifically derived ABC set by management as the Annual Catch Limit. Then the ACL is reduced by a 10% buffer to get the Annual Catch Target. Finally, the ACT is adjusted downward by discard rates and state catches to get the Total Allowable Landings. As noted in 3.2.2b, the FMP is reviewed annually and regularly revised.

Decision-making processes use the precautionary approach and are based on best available information, therefore the SG80 is met for this scoring issue.

Accountability and transparency of management system and decision-making process				
d	Guide post	Some information on the fishery’s performance and management action is generally available on request to stakeholders.	Information on the fishery’s performance and management action is available on request , and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.	Formal reporting to all interested stakeholders provides comprehensive information on the fishery’s performance and management actions and describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity.

	Met?	Yes	Yes	Yes
Rationale				

Accountability and transparency of the management system is required by multiple laws and Executive Orders. The National Standard Guidelines for National Standard 2 specifically require transparency in the provision of scientific information for fishery management. Under the heading “Transparency and openness,” the NS Guidelines state that: “The Magnuson-Stevens Act provides broad public and stakeholder access to the fishery conservation and management process, including access to the scientific information upon which the process and management measures are based. Public comment should be solicited at appropriate times during the review of scientific information. Communication with the public should be structured to foster understanding of the scientific process.” They further require that: “Scientific information products should describe data collection methods, report sources of uncertainty or statistical error, and acknowledge other data limitations. Such products should explain any decisions to exclude data from analysis. Scientific products should identify major assumptions and uncertainties of analytical models. Finally, such products should openly acknowledge gaps in scientific information” (NOAA 2018, SCS 2018).

The Council's mandate is to manage and conserve fisheries for the greatest overall benefit of the nation by relying on scientific information and data, as well as the participation of fishing communities and the public. The Council is involved in a public process and therefore makes efforts to keep all affected parties informed about Council activities (NEFMC 2020b). Whenever possible, the Council will use community input in conjunction with scientific information in the development of its FMPs. For Council Meetings, the Executive Director in consultation with the Council Chairman drafts the agenda for each meeting. The Executive Committee will review the draft agenda before it is released to the public. Timely notice of each regular meeting and emergency meeting of the Council, its SSC, AP, FIAC or other committee established under the MSRA, including time, place and agenda, shall be provided by any means that will result in wide publicity in the major fishing ports of the region (and in any other fishing ports with a direct interest in the affected fishery), noting that email notifications and website postings alone are not sufficient (NEFMC 2015). Notice of each regular meeting shall also be published in the Federal Register (FR).

The FR serves as the Council's notice of record. Meeting notices must be published for the Oversight Committee, Advisory Panel and Council meetings at least 14 days prior to the meeting date. The Council meeting agenda is also sent to the Council's mailing list (NEFMC 2020b). The Council will not take action, except in emergency situations, if that action is not listed on the published agenda. The Council may hold public hearings in order to provide the opportunity for all interested individuals to be heard with respect to the development of fishery management plans or amendments, and with respect to the administration and implementation of other relevant features of the Act. Notice of each hearing must be received by NMFS for publication in the FR at least 23 calendar days prior to the proposed hearing. The Council will also issue notices to announce the time, location, and agenda for each hearing in a manner sufficient to assure all interested parties are aware of the opportunity to make their views known. If it is determined a hearing is appropriate, the Council Chair will designate at least one voting member of the Council to officiate. An accurate record of the participants and their views will be made available to the Council at the appropriate Council meeting and maintained as part of the Council's administrative record.

The Council's Executive Committee is responsible for developing Council meeting agendas. To ensure that issues or recommendations discussed at committee meetings will in turn be addressed at the next scheduled Council meeting, oversight committee chairmen should schedule committee meetings appropriately. Public comments are allowed at Council meetings on all agenda items requiring final action and on all agenda items at Scientific and Statistical Committee and Advisory Panel meetings. Both oral and written comments may be submitted (NEFMC 2020b). In addition, the Council website has newsletters, articles, publications, meeting agendas and calendars of upcoming events and highlights current issues.

There are also various consultation policies and practices required by the Council with its OC, APs, PDTs and SSC as noted in scoring issue 3.1.2. The transparency and roles of these advisory panels and committees are further detailed in Section 10.1.8.

The SG100 is met for this scoring issue.

Approach to disputes				
e	Guide post	Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery.	The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges.	The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges.
	Met?	Yes	Yes	Yes
Rationale				

Legal disputes are handled under the Administrative Procedures Act, which governs the process by which federal agencies (e.g., NOAA/NMFS) develop and issue regulations. Opportunities are provided for the public to comment on notices of proposed rulemaking (<http://www.nmfs.noaa.gov/pr/pdfs/laws/apa.pdf>). NOAA has an extensive Dispute Resolution Process, defined by the Administrative Dispute Resolution Act of 1996, Pub. L. No. 104-320, however this is unclear how this is applied to fisheries. The Council resolves disputes by majority vote as required in section 302 of the MSRA. All stakeholders have an opportunity for input prior to the decision by the Secretary of Commerce. Any disputes remaining following adoption of regulations/rules may be resolved through the federal court system.

The Council conducts its ongoing decision-making processes in a manner designed to avoid legal disputes. The Council relies on a consensus approach among advisory bodies with room for minority reports should these groups fail to reach consensus. The Council resolves disputes (after weighing staff reports, advisory body reports, NMFS legal counsel advice, and public testimony) by majority vote held in public session as required in Section 302 of the MSRA. All stakeholders have an opportunity for input prior to the decision by the Secretary of Commerce. Legal action may also be used by those individuals or groups dissatisfied with the decisions made by the Council and NMFS through the federal court system. In addition, the wide dissemination of information to promote transparency ensures that the probability of stakeholders being caught off-guard is minimal. If legal action is required, the Office of General Counsel (OGC) provides legal advice, service and counsel for all matters that may arise in the conduct of NOAA's missions. The OGC is appointed by the Secretary of Commerce, with the approval of the President (NEFMC 2020b). The management system for the NE skate complex has not been subject to continuing court challenges. The fishery management system is legally obliged to comply with judicial decisions and does so. The fishery management system receives continuing legal advice and acts proactively to avoid legal disputes and rapidly implements judicial decisions arising from legal challenges.

The SG100 level is met for this scoring issue for all UoAs.

References

NEFMC 2020e, NEFSC 2019, NEFMC 2019, NEFMC 2003, MRAG 2019, SCS 2018, NOAA 2018, NOAA 2019c, Pace et al 2018, MRAG 2020

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	≥80
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Information gap indicator	Information sufficient to score PI
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Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	90
Condition number (if relevant)	N/A

PI 3.2.3 – Compliance and enforcement

PI 3.2.3		Monitoring, control and surveillance mechanisms ensure the management measures in the fishery are enforced and complied with		
Scoring Issue		SG 60	SG 80	SG 100
a	MCS implementation			
	Guide post	Monitoring, control and surveillance mechanisms exist, and are implemented in the fishery and there is a reasonable expectation that they are effective.	A monitoring, control and surveillance system has been implemented in the fishery and has demonstrated an ability to enforce relevant management measures, strategies and/or rules.	A comprehensive monitoring, control and surveillance system has been implemented in the fishery and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.
	Met?	Yes	Yes	Yes
Rationale				

Monitoring, control and surveillance (MCS) is carried out at-sea and shore-side for the federal fisheries by the NMFS Office of Law Enforcement (OLE) and the U.S. Coast Guard (USCG). NOAA's OLE protects marine wildlife and habitat by enforcing domestic laws and international treaty requirements designed to ensure these global resources are available for future generations (NOAA 2019). OLE special agents and enforcement officers ensure compliance with the nation's marine resource laws and take enforcement action when these laws are violated. All OLE work supports the core mission mandates of NOAA Fisheries—maximizing productivity of sustainable fisheries and fishing communities and protection, recovery, and conservation of protected species.

The Council follows the same enforcement procedures outlined by NOAA Fisheries Office of Law Enforcement. There is a strong enforcement program to deter fisheries violations through successful prosecution and deterrent penalties. NOAA has authority and responsibility under more than 30 federal statutes to manage sustainable fisheries, and to protect living marine resources, including marine areas and species (NOAA Policy for Assessment of Penalties and Permit Sanctions – March 16, 2011, 56pp). Officers and agents in the NOAA OLE, the US Coast Guard, Customs and Border Protection, Immigration and Customs Enforcement, US Fish and Wildlife Service, and State officers authorized under Cooperative Enforcement Agreements, monitor compliance and investigate potential violations of the statutes and regulations enforced by NOAA. Monitoring, control and surveillance are carried out across the fishing sectors to ensure observance of regulatory and statute requirements. Monitoring, control and surveillance actions include:

- Fishing permit requirements
- Fishing permit and fishing vessel registers
- Vessel and gear marking requirements
- Fishing gear and method restrictions
- Reporting requirements for catch, effort, and catch disposition
- Vessel inspections
- Record keeping requirements
- Auditing of licensed fish buyers
- Control of transshipment
- Monitored unloads of fish
- Information management and intelligence analysis
- Analysis of catch and effort reporting and comparison with landing and trade data to confirm

accuracy

- Boarding and inspection by fishery officers at sea
- Aerial and surface surveillance

The Cooperative Enforcement Program is a partnership with the federal and state agencies that increases the enforcement activities and promotes compliance with federal laws and regulations. The program uses two main tools:

3. Cooperative Enforcement Agreements – authorize state and US territorial marine conservation law enforcement officers to enforce federal laws and regulations.
4. Joint Enforcement Agreement – include formal operations plan that transfers funds to state and US territorial law enforcement agencies to perform law enforcement services in support of federal regulations (NOAA 2018 OLE).

Reporting requirements are in place for the skate fishery. All vessels fishing for skates are required to submit Vessel Trip Reports (VTR), regardless of the species retained. VTRs must be received 15 days after the end of the reporting month, and weekly for vessels fishing on a NE multispecies permit (by Tuesday of the week after the fishing trip has ended). VMS is not required for the skate fishery. There are no observer requirements for the skate fishery, however vessels must abide by NE multispecies, scallop, or monkfish regulations if fishing on a DAS for one of those fisheries.

It was suggested in the 2020 Skate Monitoring report that clearer skate quota monitoring and catch accounting was needed to improve management uncertainty. It was also stated that the Council should consider management measures, beyond the continuing possession prohibition, that will foster rebuilding for species like the thorny skate (NEFMC 2020e). This uncertainty is minimal, and methods will be reexamined in the 2021 skate assessment¹ to ensure all catch components are included. Note that the Council decided in September 2020 to not create a Northeast Skate Complex Annual Monitoring Report in 2021. All the data included in this annual report will be incorporated into other Council documents that are being prepared this year, including the skate fishery specifications for 2022-2023 and the ongoing Amendment 5 action (NEFMC pers. Communication).

A comprehensive monitoring, control and surveillance system has been implemented in the fishery and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. The SG 60, SG80 and SG100 are met for this scoring issue.

Sanctions				
b	Guide post	Sanctions to deal with non-compliance exist and there is some evidence that they are applied.	Sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence.	Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence.
	Met?	Yes	Yes	No
Rationale				

The Code of Federal Regulations list the sanctions to deal with non-compliance. Penalties for fisheries related violations include fines; permit cancellations or suspensions, permanent prohibitions on participation in the fishery, forfeiture of fish, vessels, other property and quota; and imprisonment. With respect to permit sanctions, where applicable, the statutes that NOAA enforces generally provide broad authority to suspend or revoke permits.

¹ It should be noted that the Northeast Fisheries Science Center (NEFSC) planned to conduct a management track assessment in 2021, but as the NEFSC bottom trawl survey was cancelled in 2020, the schedule for all NEFSC stock assessments was reevaluated during the fall of 2020. As a result, all management track assessments for skates have been postponed. The NEFSC, with input from the Council's Skate Plan Development Team (PDT), will be updating the survey indices and catch information, using 2019 as the end year (NEFMC comment during the PCDR).

The NOAA Fisheries' Northeast Division (NED) OLE report to the Council for June – August 2020 listed Individual Violations Associated with Summary Settlements. None of these settlements were associated directly with Little and Winter skate fisheries (NOAA 2020d).

A Freedom of Information Act (FOIA) request was submitted to NOAA Fisheries on August 28, 2020 to receive enforcement actions and data relative to the Little and Winter skate fisheries from 2017-present. A list of five infractions were reported, all from 2018 and listed as 'closed', with an additional seven open cases (Table 21). It was stated by NOAA OLE that it is not agency policy to discuss or give information on open cases. Table 22 gives the cite description, the gear type, and the fishery

Table 21 FOIA for the Northeast Little and Winter skate fisheries

Division	Incident #	Date reported	Status	Disposition	Title	Cite
Northeast (NE)	1800414	1/21/18	Closed	OLE-WW Affirmed	50 CFR	648.14(9)
NE	1801025	02/27/18	Closed	OLE-WW Affirmed	50 CFR	648.322(e)(1)
NE	1804632	06/01/18	Closed	OLE-WW Affirmed	50 CFR	648.322(c)(4)
NE	1804684	07/12/18	Closed	OLE-WW Affirmed	50 CFR	648.14(k)(2)
NE	190228	11/16/18	Closed	GCES-Settlement Agreement Satisfied	50 CFR	648.14(e)(1); 229.3(g)

7 open cases

Table 22 Description of Infractions

Cite Description	Gear	Fishery
Violate any provision of an in-season action to adjust trip limits, gear usage, season, area access and/or closure, or any other measure authorized by this part.	Dredge	NE - Skate Complex
(e) Prohibitions on possession of skates. A vessel fishing in the EEZ portion of the Skate Management Unit may not: (1) Retain, possess, or land barndoor or thorny skates taken in or from the EEZ portion of the Skate Management Unit.	Non-pelagic Trawl	NE - Skate Complex
(4) The vessel owner or operator possesses or lands only whole skates less than 23 inches (58.42 cm) total length and does not possess or land any skate wings.	Non-pelagic Trawl	NE - Skate Complex
(2) Permit requirements for vessel and operator permit holders. It is unlawful for any owner or operator of a vessel issued a valid Federal NE multispecies permit or letter under 648.4(a)(1)(i), unless otherwise specified in 648.17, to do any of the following: (iii) Fail to comply with the pre-trip notification requirements of the NE multispecies observer program specified in 648.11(k). It is unlawful for any person to do any of the following: (1) Assault, resist, oppose, impede, harass, intimidate, or interfere with or bar by command, impediment, threat, or coercion any NMFS-approved observer or sea sampler conducting his or her duties; any authorized officer conducting any search, inspection, investigation, or seizure in connection with enforcement of this part; any official designee of the Regional Administrator conducting his or her duties, including those duties authorized in 648.7(g). (g) It is prohibited to violate any regulation in this part or any provision of section 118 of the Act.	Gillnet	NE - Multispecies & Skate Complex

The information request was for all enforcement actions related to the NE skate fishery and/or enforcement action related to the skate fishery by gillnet, longline or bottom trawl in the last 2-3 years (2017-2020) (See Appendix 2). Because there were only 5 infractions during that time, and no other enforcement report implicated this fishery, there is evidence that sanctions to deal with non-compliance exist, are consistently applied and thought to provide effective deterrence. The SG80 is met. Even though that sanctions to deal

with non-compliance exist, and it is likely they are consistently applied and provide effective deterrence, there are still 7 open cases and the infraction data is not known for these cases. Therefore, it cannot be said with confidence that sanctions demonstrably provide effective deterrence. Therefore, the SG100 level is not met for this scoring issue.

Compliance				
c	Guide post	Fishers are generally thought to comply with the management system for the fishery under assessment, including, when required, providing information of importance to the effective management of the fishery.	Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery.	There is a high degree of confidence that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery.
	Met?	Yes	Yes	No
Rationale				

The 2019 NOAA OLE Enforcement Report (January – June 2019), the 2018 Council Report for the NE Enforcement Division and the OLE Annual Report for the FY of 2017 did not list any specific incidents related to the skate fishery, however there were some reported overages on possession limits for Atlantic sea scallops, which is under the NE Multispecies federal permit. The FOIA request referenced in 3.2.4b showed 5 closed cases and 7 open cases. Based on lack of reported incidents, the fishers in the Little and Winter skate are generally thought to comply and some evidence exists that fishermen comply with the management system. The SG80 level is met. However, without further evidence, there is not a high degree of confidence that fishers comply with the management system under assessment and provide information of importance to the effective management of the fishery. The SG 80 is met, but the SG100 level is not met for any of the UoAs.

Systematic non-compliance				
d	Guide post		There is no evidence of systematic non-compliance.	
	Met?		Yes	
Rationale				

To the assessment team's knowledge, there is no evidence of systematic non-compliance for the skate fishery. The lack of sanctions issues or citations in the OLE reports confirm that the fishery is generally compliant.

References

NEFMC 2020e; NOAA 2018 OLE; NOAA 2018a; SCS 2018; NOAA 2020d; USOFR (U.S. Office of the Federal Register). 1998. Enforcement Policy. Code of Federal Regulations, Title 50, Part 600.740. U.S. Government Printing Office, Washington, D.C.

Draft scoring range and information gap indicator added at Announcement Comment Draft Report

Draft scoring range	60-79
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Information gap indicator	More information sought
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Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	85
Condition number (if relevant)	N/A

PI 3.2.4 – Monitoring and management performance evaluation

PI 3.2.4		There is a system of monitoring and evaluating the performance of the fishery-specific management system against its objectives There is effective and timely review of the fishery-specific management system		
Scoring Issue		SG 60	SG 80	SG 100
a	Evaluation coverage			
	Guide post	There are mechanisms in place to evaluate some parts of the fishery-specific management system.	There are mechanisms in place to evaluate key parts of the fishery-specific management system.	There are mechanisms in place to evaluate all parts of the fishery-specific management system.
	Met?	Yes	Yes	No
Rationale				

The Council meets five times a year and has mechanisms in place to evaluate all parts of the management system. The annual management process is detailed in Council Operating Procedure (NEFMC 2020b). Under the annual cycle, eligible management measures are put into place and adjusted through routine in-season evaluation and actions. The comprehensive amendments to the fishery management plan, averaging about two per year since the implementation of the council system, demonstrate the wide range of management topics evaluated by the Council. Congress reviews the MSRA every five years and amends it as necessary. Although there are mechanisms in place to evaluate key parts of the fishery-specific management system, it is unclear if mechanisms are in place that evaluate all parts of the fishery-specific management system. The SG80 level is met, but the SG100 level is not met for all UoAs.

b	Internal and/or external review			
	Guide post	The fishery-specific management system is subject to occasional internal review.	The fishery-specific management system is subject to regular internal and occasional external review.	The fishery-specific management system is subject to regular internal and external review.
	Met?	Yes	No	No
Rationale				

Northeast Skate Complex Annual Monitoring Report is produced annually due to the regulations implementing the management measures for the Northeast Skate Complex Fisheries, which states that *the Skate PDT shall meet at least annually to review the status of the species in the skate complex. At a minimum, this review shall include annual updates to survey indices, fishery landings and discards; a re-evaluation of stock status based on the updated survey indices and the FMP's overfishing definitions; and a determination of whether any of the accountability measures (AMs) specified under §648.323 were triggered. The review shall also include an analysis of changes to other FMPs (e.g., Northeast Multispecies, Monkfish, Atlantic Scallops, etc.) that may impact skate stocks, and describe the anticipated impacts of those changes on the skate fishery* (NEFMC 2019).

Decisions related to the FMP for the Northeast skate complex are reviewed and produced as part of ongoing meetings and collaboration between oversight committees and their advisory panels. The

Northeast Skate Complex Committee and the Northeast Skate Complex Advisory Panel continue to review and update the FMP. There are several meetings scheduled for the 2020 year, including a Joint Advisory and Committee meeting and a PDT meeting.

As part NOAA's ongoing improvement efforts, a systematic peer review process began in 2013 at all six of the regional science centers and at the headquarters Office of Science and Technology. Experts from within and outside the agency carefully examine science programs on a 5-year peer review cycle to improve integration, identify best practices, and share successes and challenges. The review process includes opportunities for public involvement, which will be part of our broader dialog with fishery management councils, fishing industry, and other stakeholders (NOAA 2018c).

All Council recommendations are reviewed by NMFS, NOAA, and the Department of Commerce, and NOAA. OGC reviews proposed actions to assure compliance with the MSRA. The Center for Independent Experts periodically reviews the stock assessments. Although some external review is conducted with NOAA and their regional science centers, it is unclear how often the fishery-specific management system is externally reviewed. Personal communication with NOAA fisheries and NEFMC stated that although there is a thorough review of the stock assessments and internal review through the different Advisory Panels, PDT, etc., external review of the fishery specific management system does not occur. Therefore, the fishery meets the SG60 level, but the SG80 nor the SG100 level are met for this scoring issue.

References

NEFMC 2019; NEFMC 2020

[Draft scoring range and information gap indicator added at Announcement Comment Draft Report](#)

Draft scoring range	60-70
Information gap indicator	More information is sought to score

Overall Performance Indicator scores added from Client and Peer Review Draft Report

Overall Performance Indicator score	70
Condition number (if relevant)	2

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12 Appendices

12.1 Assessment information

This is the first MSC assessment for the Southern New England Little and Winter skate fishery. Harmonization with the MSC certified US Atlantic Spiny dogfish, Winter and Little skate fishery will be necessary, resulting in one condition for this fishery for Principle 1. Details of the harmonization and other conditions are outlined in Sections 12.5 and 12.8.

12.2 Evaluation processes and techniques

12.2.1 Site visits

The assessment process as defined in the MSC Fishery Certification Process version 2.1 was followed in this audit. Information supplied by the clients and management agencies was reviewed by the assessment team ahead of the onsite meeting, and discussions with the clients and management agencies centered on the content within the provided documentation. In cases where relevant documentation was not provided in advance of the meeting, it was requested by the assessment team and subsequently supplied during, or shortly after the meeting. Because a similar assessment for the US Atlantic Spiny dogfish and Winter skate was recently completed by MRAG Americas (2019), with the scope extension for Little skate still ongoing, the assessment team focused on any new changes in stock assessments, management, etc. since 2019. Due to the same species being assessed and the same geographical area, the primary changes were in the version of the MSC Standard used. The data from 2019/2020 has had minimal changes to what was recently assessed, therefore our need for meetings with stock assessment scientists, managers, etc., was reduced.

The site visit was held remotely via the GoToMeeting platform. Below is the General Meeting Agenda:

Meeting Agenda – Southern New England Winter and Little skate fishery
<p>Date: August 4th- 5th, 2020</p> <p>Location: GoToMeeting Please join my meeting from your computer, tablet or smartphone. https://global.gotomeeting.com/join/882314317</p> <p>You can also dial in using your phone. United States: +1 (872) 240-3412</p> <p>Access Code: 882-314-317</p> <p>New to GoToMeeting? Get the app now and be ready when your first meeting starts: https://global.gotomeeting.com/install/882314317</p>

Objectives: To conduct a full assessment and review of the Southern New England Winter and Little skate fishery against the Marine Stewardship Council's (MSC) Standard for sustainability. This assessment is a duplicate assessment of the Atlantic Spiny dogfish and Winter skate (2019), with Little skate still in the scope extension process. The reports from that assessment can be accessed at the following link: <https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish-and-winter-skate/@assessments>. Because of this, the assessment team has directed the efforts of this assessment for updates since that report was published in 2019.

1. Introductions

- Introductions of the team, their roles, and responsibilities regarding scoring the fishery
- ASI
- Screen shot for attendance

2. Overview of the MSC assessment process
3. General Topics for discussion and what information is needed:
 - Review of the management (regulations, FMP amendments, frameworks, etc.).
 - i. How is the management system reviewed internally and externally?
 - Changes to the scientific information, including stock assessments
 - i. Uncertainties in the thresholds and targets established and how they relate to potential stock productivity (MSY)
 - Interactions with Endangered, Threatened, and Protected (ETP)
 - i. The gillnet unit and interactions with the endangered North Atlantic right whales
 - ii. Review of bycatch mitigation measures
 - Essential fish habitat
 - i. Omnibus Deep-Sea Coral Amendment
4. Questions/meeting wrap-up

The following participants were in attendance:

Name	Affiliation
Amanda Stern-Pirlot (team leader), Principle 2	MRAG Americas
Erin Wilson, Principle 3	MRAG Americas
Joseph Powers, Principle 1	MRAG Americas assessment team member
Stephanie Good	Assurance Services International (ASI)
Martin Vincent (Client group)	Providence Bay Fish Company Inc.
Dana Barker (Client group)	Providence Bay Fish Company Inc.
Silvina Droukas	Nebula Foods
Carlos Vassal	Nebula Foods
Cynthia Ferrio	GARFO
Allison Ferreira	NOAA Fisheries
Russell Brown	NOAA Fisheries
Kathy Sosebee	NOAA Fisheries

12.2.2 Stakeholder participation

Sixty days prior to the audit site visit, all stakeholders were informed of the visit and the opportunity to provide information to the auditors in advance of, or during, the site visit. We received no requests from outside stakeholders to take part in meetings, nor did we receive any written submissions regarding the Southern New England Winter and Little skate fishery.

The following stakeholders were contacted for this assessment:

Name	Organization type
MAFMC -Mid Atlantic Fishery Management Council	Agency
NEFMC	Agency
State of Massachusetts, Fisheries Division	Agency
ASMFC	Agency
NEFSC	Agency
NOAA GARFO	Agency
NOAA Office of Law Enforcement (OLE)	Agency
Massachusetts Department of Marine Fisheries (DMF)	Agency
Ocean Foundation/Shark Advocates International	NGO
The Humane Society of the United States	NGO
American Bluefin Tuna Association	NGO
Cape Cod commercial Hook Fishermen's Association, Inc.	Industry

Maine Coast Fishermen's Association	Industry
Penobscot East Center Downeast Groundfish Fishermen Initiative	Industry
Environmental Defense Fund	NGO
National Audubon Society	NGO
MSC	NGO

12.2.3 Evaluation techniques

MRAG published an announcement of the assessment on our website and sent a direct email to all stakeholders on our stakeholder list. MSC posted the announcement on its Southern New England Winter and Little skate track-a-fishery page, as well as sent it by email in their Fishery Announcements newsletter to all registered recipients. At this time, MRAG Americas also announced the assessment site visit dates and location, as well as the assessment team. This was done according to the process requirements as laid out in MSC's Fisheries Certification Process v2.1, and in the MSC Fisheries Standard v2.0/2.01. The site visit was held remotely on August 4th -5th, 2020. Together, these media presented the announcement to a wide audience representing industry, agencies, and other stakeholders.

Information supplied by the clients and management agencies was reviewed by the assessment team ahead of the onsite meeting, and discussions with the clients and management agencies centered on the content within the provided documentation. In cases where relevant documentation was not provided in advance of the meeting, it was requested by the assessment team and subsequently supplied during, or shortly after the meeting. The assessment team and the clients set up meetings with the Southern New England Winter and Little skate fisheries' management and science personnel, and industry and harvest-sector representatives relevant to the fishery assessment.

In the MSC Fisheries Standard version v2.01 default assessment tree used for this assessment, the MSC has 28 PIs, six in Principle 1, 15 in Principle 2, and seven in Principle 3. The PIs are grouped in each principle by 'component.' Principle 1 has two components, Principle 2 has five, and Principle 3 has two. Each PI consists of one or more 'scoring issues;' a scoring issue is a specific topic for evaluation. 'Scoring Guideposts' define the requirements for meeting each scoring issue at the 60 (conditional pass), 80 (full pass), and 100 (state of the art) levels.

Note that some scoring issue may not have a scoring guidepost at each of the 60, 80, and 100 levels; in the case of the example above, scoring issue (b) does not have a scoring issue at the SG60 level. The scoring issues and scoring guideposts are cumulative; this means that a PI is scored first at the SG60 levels. If not all of the SG60 scoring issues meet the 60 requirements, the fishery fails, and no further scoring occurs. If all of the SG60 scoring issues are met, the fishery meets the 60 level, and the scoring moves to SG80 scoring issues. If no scoring issues meet the requirements at the SG80 level, the fishery receives a score of 60. As the fishery meets increasing numbers of SG80 scoring issues, the score increases above 60 in proportion to the number of scoring issues met; PI scoring occurs at 5-point intervals. If the fishery meets half the scoring issues at the 80 level, the PI would score 70; if it meets a quarter, then it would score 65; and it would score 75 by meeting three-quarters of the scoring issues. If the fishery meets all of the SG80 scoring issues, the scoring moves to the SG100 level. Scoring at the SG100 level follows the same pattern as for SG80.

Principle scores result from averaging the scores within each component, and then from averaging the component scores within each Principle. If a Principle averages less than 80, the fishery fails.

Scoring for this fishery followed a consensus process in which the assessment team discussed the information available for evaluating PIs to develop a broad opinion of performance of the fishery against each PI. Review of sections 3.2-3.5 by all team members assured that the assessment team was aware of the issues for each PI. Subsequently, the assessment team member, or members in this case, responsible for each principle filled in the scoring table and provided a provisional score. The assessment team

members reviewed the rationales and scores, and recommended modifications as necessary, including possible changes in scores.

PI scores were entered into MSC's Fishery Assessment Scoring Worksheet (Section 7.1) to arrive at Principle-level scores.

12.3 Peer Review reports

To be drafted at Public Comment Draft Report

There were three peer reviewers selected for this assessment: Peer Reviewer A, B and C. Below are their comments.

Table 23 Peer Reviewer A

Question	Yes/No	Peer Reviewer Justification (as given at initial Peer Review stage). Peer Reviewers should provide brief explanations for their 'Yes' or 'No' answers in this table, summarising the detailed comments made in the PI and RBF tables.	CAB Response to Peer Reviewer's comments (as included in the Public Comment Draft Report - PCDR)
Is the scoring of the fishery consistent with the MSC standard, and clearly based on the evidence presented in the assessment report?	Yes	No justification required	No response required
Are the condition(s) raised appropriately written to achieve the SG80 outcome within the specified timeframe? [Reference: FCP v2.2, 7.18.1 and sub-clauses]	Yes	No justification required	No response required
Enhanced fisheries only: Does the report clearly evaluate any additional impacts that might arise from enhancement activities?	NA		NA
Optional: General Comments on the Peer Review Draft Report (including comments on the adequacy of the background information if necessary). Add extra rows if needed below, including the codes in Columns A-C.	NA	In general very well prepared and easy to follow and understand; perhaps a shortage of detail on occasion that makes reviewing slightly more difficult.	Thank you for your comment. We will work to address specific comments and the lack of detail in some areas.

<p>Optional: General Comments on the Peer Review Draft Report (including comments on the adequacy of the background information if necessary). Add extra rows if needed below, including the codes in Columns A-C.</p>	<p>NA</p>	<p>Regarding COC the report states for each UoA that: "No. The main gear types evaluated in this fishery (northeast sink gillnet, and northeast bottom trawl) account for all commercial landings to the client group processing facility."</p> <p>However the ACDR states that for both Little Skate and Winter Skate a proportion of the catch for each UoA is also from longlines, and stated the following</p> <p>"No. The main gear types evaluated in this fishery (gillnet, trawl and bottom longline) account for >95% of commercial landings."</p> <p>There is in the PCDR a mention of handline gear, which seems to imply that this can take place on the same trip, but the justification as to why catches from this are unlikely to be mixed with the certified catch is somewhat vague.</p> <p>This should be clarified, and further checks made to ensure there is definitely also no risk of longline caught (and therefore uncertified) fish being mixed with the certified catch.</p> <p>Additionally (accepting that over 98% of wings are from winter skate) it is unclear if there is also a risk of other skate species being mixed with these as they may not be easily distinguishable after processing. Do the same vessels catch and process other species as part of the same fishing trips?</p>	<p>The traceability section has been amended to provide the needed clarity. Skates are caught by longline and handline gear too, but the client group processing facility never takes delivery from vessels using this gear type. In fact, at least 99% of their deliveries come from gillnet fisheries, with only potentially a very small fraction coming from bottom trawlers in rare circumstances. Thus, we have included bottom trawl as a UoA for this assessment to avoid any traceability issues that might occur should a trawler deliver to this dock. Regarding mixing, it is only winter and little skates that are at times difficult to distinguish at the time wings are cut and sold. Barndoor skate is also landed, but they are readily distinguishable as whole skate and as wings only. Thus, there is no risk of misidentification within the fishery or at offload to the plant.</p>
<p>Optional: General Comments on the Peer Review Draft Report (including comments on the adequacy of the background information if necessary). Add extra rows if needed below, including the codes in Columns A-C.</p>		<p>Ref section 5.1</p> <p>I have assumed that "Northeast bottom trawl" and "bottom trawl" are the same for purposes of UoA and UoC.</p> <p>Similarly I have assumed that "sink gillnet" "Northeast sink gillnet" and "Gillnet (Anchor/Drift and sink float gillnets included)" are the same for purposes of UoA and UoC.</p>	<p>Thank you. We have ensured that "northeast bottom trawl" and "northeast sink gillnet" are used throughout.</p>

	NA	<p>Following are all minor comments;</p> <p>Figure 2 would benefit from being able to see the labels on the Y axis (kg/tow)</p> <p>Table 9 would benefit from having a column with equivalent definitions of overfishing and overfished for little skate.</p> <p>Table 10 is incomplete</p>	Figure 2, Table 9 and Table 10 edited to address these points
	NA	Some references omitted in scoring tables eg NOAA 2016, NOAA 2020 in 2.1.2; NEFMC 2011 in 2.4.1	Thank you, these have now been added.
	NA	The team has missed IUCN redlist species from the definitions of ETP species on page 47, although it has clearly used this definition in assessing the ETP species	Thank you, this has been added to the definitions, though does not change the suite of ETP species under consideration.
	NA	The date of the assessment report in the header gives the year as 2019	Thank you for the comment. The 'September 2019' in the header is for version control.
	NA	<p>On page ten there is a statement clearly left over from the pre assessment or ACDR</p> <p>"Although early in the assessment, no issues were identified at this stage that would prevent the fishery from achieving MSC certification. More information is needed to make an accurate determination."</p> <p>I suggest checking for similar throughout the document</p>	This statement has been revised.
	NA	Where do the PDAs fit into Figure 12 - are they part of the "Science inputs"?	Thank you for your comment. Are you referring to PDT or Plan Development Teams? If so, I would assume that they fall in Science inputs in this figure, although it seems they were not included in this representation of Council structure.
	NA	<p>Page 65 the information on common dolphins is confusing. Re the sink gillnet information I do not understand how you can have "a total of 1.4 observed mortalities over the past 5 year". Is this figure perhaps an annual average? Also check the subsequent paragraph on the trawl fishery (the no 225 erroneously inserted?).</p>	Thank you, the text has been corrected to be clear that the 1.4 is an annual average over the past 5 years. Also, in the succeeding paragraph, the misplaced line break is what caused the confusion. The sentence is "4 of 225" attributed to the fishery. Hopefully, this is now clear.

UoA stock	UoA gear	PR (A/B/C)	PI	PI Information	PI Scoring	PI Condition	Peer Reviewer Justification (as given at initial Peer Review stage)	CAB Response to Peer Reviewer's comments (as included in the Public Comment Draft Report - PCDR)	CAB Response Code
Insert extra rows for P1 PIs if separate scores given for different UoA stocks	Insert extra rows for P2 PIs if separate scores given for different UoA gear types	Peer Reviewer (A/B/C)	Performance Indicator (PI)	Has all available relevant information been used to score this PI?	Does the information and/or rationale used to score this PI support the given score?	Will the condition(s) raised improve the fishery's performance to the SG80 level?	<p>Peer reviewers (PRs) should provide support for their answers in the left three columns by referring to specific scoring issues and/or scoring elements, and any relevant documentation as appropriate. Additional rows should be inserted for any PIs where two or more discrete comments are raised, e.g. for different scoring issues, allowing CABs to give a different answer in each case. Paragraph breaks may also be made within cells using the Alt-return key combination.</p> <p>Detailed justifications are only required where answers given are one of the 'No' options. In other (Yes) cases, either confirm 'scoring agreed' or identify any places where weak rationales could be strengthened (without any implications for the scores).</p>	<p>CABs should summarise their response to the Peer Reviewer comments in the CAB Response Code column and provide justification for their response in this column.</p> <p>Where multiple comments are raised by Peer Reviewers with more than one row for a single PI, the CAB response should relate to each of the specific issues raised in each row.</p> <p>CAB responses should include details of where different changes have been made in the report (which section #, table etc).</p>	See codes page for response options

Winter Skate	Bottom Trawl and Sink Gillnet	PR A	1.1.1	No (non-material score reduction expected)	No (non-material score reduction expected)	Yes	<p>It is hard to reconcile the 100 scores for this PI (notably at SI 1.1.1b) with the statement in the supporting information that "since status criteria are based on historical indices of biomass, a stock may well be sustainable, but still not achieving MSY".</p>	<p>The statement "since status criteria are based on historical indices of biomass, a stock may well be sustainable, but still not achieving MSY", perhaps gives more emphasis than was meant. Essentially, any measure of status depends on the determination of a BMSY or proxy and then upon the current biomass relative to the BMSY measurement. There is uncertainty in both measurements in all stock assessments and the skates are no exception. But with the skates, where the BMSY measure is based upon historical surveys, there is likely more uncertainty than in a typical assessment. Nevertheless, the survey evidence suggests that the two skates are near their Bmsy proxy targets. Additionally, the BMSY proxy is greater than 50% of the highest observed survey point (from the 3-year running average) for both skate stocks over about a half of a century of surveys. This supports the choice of the BMSY proxy and further supports the score of Yes for SG100 for 1.1.1.b.</p> <p>The main report section 8 and the justification for 1.1.1b were modified supporting the above argument.</p>	Not accepted (no change)
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Little Skate	Bottom Trawl and Sink Gillnet	PR A	1.1.1	No (non-material score reduction expected)	No (non-material score reduction expected)	Yes	<p>It is hard to reconcile the 100 scores for this PI (notably at SI 1.1.1b) with the statements in the supporting information that "since status criteria are based on historical indices of biomass, a stock may well be sustainable, but still not achieving MSY" (applicable to both species) and "the life history nature of Little skate (relatively old age at maturity) suggests a need for added precaution in management, including regular review of the basic assessment approaches" (applicable to Little skate only).</p>	<p>The statement "since status criteria are based on historical indices of biomass, a stock may well be sustainable, but still not achieving MSY", perhaps gives more emphasis than was meant. Essentially, any measure of status depends on the determination of a BMSY or proxy and then upon the current biomass relative to the BMSY measurement. There is uncertainty in both measurements in all stock assessments and the skates are no exception. But with the skates, where the BMSY measure is based upon historical surveys, there is likely more uncertainty than in a typical assessment. Nevertheless, the survey evidence suggests that the two skates are near their Bmsy proxy targets. Additionally, the BMSY proxy is equal to 50% of the highest observed survey point (from the 3-year running average) for both skate stocks over about a half of a century of surveys. This supports the choice of the BMSY proxy and further supports the score of Yes for SG100 for 1.1.1.b.</p> <p>The main report section 8 and the justification for 1.1.1b were modified supporting the above argument.</p>	Not accepted (no change)
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Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	1.1.2	NA (PI not scored)	NA (PI not scored)	NA	There is good evidence that stocks are not overfished.	No response needed.	NA (No response needed)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	1.2.1	No (scoring implications unknown)	No (scoring implications unknown)	NA	It is not completely clear to what degree the harvest strategy is responsive to the state of the stock (SI1.2.1a) for the individual species stocks (ie Winter skate and Little skate) because the strategy is based around TALs for the skate complex. The assessment considers that the combined winter and little skate stocks have always dominated the overall skate stock but it is not clear from figure 2 if this is the case due to lack of units on the Y axes. The assessment also seems to assume the ratio of Little Skate to Winter skate BSI (or at least Little skate to total skate BSI) has remained more or less consistent but the information presented in Figure 2 suggests that this is not completely true, there having been a different ratio during the 1980s and then only a broad consistency since then. Without such a consistency it is hard to see how the harvest strategy can be said to be responsive to the state of the stock at the species level even at the 80 level. Some of these uncertainties are acknowledged in the scoring rationale for PI 1.2.4 (eg uncertainties in the linkage between the stock SVI	The rational for 1.2.1a and the Report was revised to strengthen the arguments for SG 80. Essentially, the harvest strategy coupled with the FMPs management procedures addresses a two species (little/winter) "complex" with some allowance for the other species. Should one of the two species be found to be undergoing overfishing an action to stop overfishing is required, this would mean a reduction in ABC ACL TAL overall as a precautionary measure. The argument is that for these two species the HS/FMP work together to achieve the objectives. We have doubts about how well it works for the other species in the complex, but for these two it is sufficient for SG80. See Section 8.1 and 1.2.1 rationale.	Accepted (no score change, additional evidence presented)

							and the HCR for the skate complex, 1.2.4a) but they are relevant here.		
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	1.2.2	Yes	Yes	Yes	I agree with the scoring and the rationale.	No response needed.	NA (No response needed)

Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	1.2.3	No (scoring implications unknown)	No (scoring implications unknown)	NA	There is little information presented on the biomass surveys (federal groundfish surveys) that are the basis of the fishery stock information, and there is no indication of possible error (eg no error bars on biomass indices). Although clearly they are regular biannual surveys with a long time series, the degree of standardisation of methods/locations with time, number and distribution of tows relative to the species distribution etc are all unclear (seasonal inshore/offshore migration has been mentioned, as is often the case for skates and rays; does this influence the appropriateness of the tow locations?). It is also unclear whether only the fall survey information is used. It is therefore not possible to confirm whether the scores in this respect are appropriate on the basis of the information presented.	Additional information/editing has been introduced into the Report to address this issue and thus, the rationale has been revised accordingly. The rationale focuses on the sufficiency of the information relative to the existing harvest strategy and the limitations of that information relative to SG 100. Additional information is provided on the surveys, as well.	Accepted (no score change, additional evidence presented)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	1.2.4	Yes	Yes	Yes	I agree with the scoring and the resulting condition.	Scoring Agreed No Response needed	NA (No response needed)

Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.1.1	No (change to rationale expected, not to scoring)	No (change to rationale expected, not to scoring)	NA	For both gears the amounts of barndoor skate would indicate it as a minor primary species not a main primary species.	Barndoor skate shows up as <2% of the catch in both gear types, but for the trawl it's only slightly below, and it has been greater in the past. For the sake of precaution, we opted to score this as a main primary species, because it's part of the same complex as the target stocks (skate complex) and is considered a "more vulnerable" species according to the MSC criteria. Evaluating it as main facilitates keeping a closer eye on it in this assessment.	Not accepted (no change)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.1.2	No (non-material score reduction expected)	No (non-material score reduction expected)	NA	For both gears the amounts of barndoor skate would indicate it as a minor primary species not a main primary species. I am not sure which other of the many other minor species would be primary. However, as the team have not assessed minor species, I do not see how the score of 100 is justified in SI 2.1.2a, and hence also 2.1.2b and 2.1.2c	For 2.1.2a we have reduced the score to 80, as the Peer Reviewer rightly points out, we do not have adequate evidence to conclude that there is a strategy in place for all main and minor primary species. SIb and SIc already score as 80 for barndoor skate, and 100 for the others, as b and c do not require the evaluation of the implementation and evaluation of the strategy against ALL primary species as SIa does. See above for an explanation of why we chose to classify barndoor skate as main rather than minor.	Accepted (non-material score reduction)

Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.1.3	No (score increase expected)	No (score increase expected)	NA	Again as barndoor skate fits the definition of a minor primary species not a main, the scores at 100 might conceivably change (increase in this case?) at least for SI 2.1.3a	Barndoor skate shows up as <2% of the catch in both gear types, but for the trawl it's only slightly below, and it has been greater in the past. For the sake of precaution, we opted to score this as a main primary species, because it's part of the same complex as the target stocks (skate complex) and is considered a "more vulnerable" species according to the MSC criteria. Evaluating it as main facilitates keeping a closer eye on it in this assessment.	Not accepted (no change)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.2.1	Yes	Yes	NA	I agree with the scoring and rationale		NA (No response needed)
Winter Skate and Little Skate	Bottom Trawl	PR A	2.2.2	Yes	Yes	NA	Is there arguably a basis for scoring the SI2.2.2c higher with respect to the bottom trawl UoAs on the basis of the negligible interaction with seabirds?	Yes, that's true, but for the sake of efficiency, and because it's a precautionary option with no material impact in this case, we have elected to score all scoring elements for both UoA gear types.	Not accepted (no change)
Winter Skate and Little Skate	Bottom Trawl	PR A	2.2.3	Yes	Yes	NA	Again is there arguably a basis for scoring the SI2.2.3c and possibly SI2.2.3a higher with respect to the bottom trawl UoAs on the basis of the negligible interaction with seabirds?	Yes, that's true, but for the sake of efficiency, and because it's a precautionary option with no material impact in this case, we have elected to score all scoring elements for both UoA gear types.	Not accepted (no change)

Winter Skate and Little Skate	Sink Gillnet	PR A	2.3.1	No (scoring implications unknown)	No (scoring implications unknown)	NA	Table 15 includes North Atlantic Right Whale wrt the gillnet fishery, though not included as a contributor to the Category I classification nor as a species observed to be caught in the last five years. Does this inclusion mean it has been observed as caught previously to the five year period for example? If so, given the extremely low and declining population of this species and its extreme vulnerability to both lethal and sub-lethal effects of entanglement then strong consideration of the implications should be undertaken. The species has had a consistently low estimate of PBR for many years. At the very least the reason for its inclusion in the table should be clarified.	Table 15 is excerpted from the MMPA List of Fisheries. Because of the concerns related to the declining population size of endangered North Atlantic Right Whales and because they appear on this list, we investigated the issue of documented interactions or evidence of entanglement and discovered the most recent positive sink gillnet entanglement was in the early 1990s, though there was evidence of a drift gillnet entanglement (different gear and fishery) in 2012. On this basis, we decided not to include this stock as an ETP scoring element in this assessment. This data and reasoning is explained more fully in the harmonization section of the report.	Accepted (no score change, change to rationale)
Winter Skate and Little Skate	Sink Gillnet	PR A	2.3.2	No (scoring implications unknown)	No (scoring implications unknown)	NA	Potentially as above re NARW	Table 15 is excerpted from the MMPA List of Fisheries. Because of the concerns related to the declining population size of endangered North Atlantic Right Whales and because they appear on this list, we investigated the issue of documented interactions or evidence of entanglement and discovered the most recent positive sink gillnet entanglement was in the early 1990s, though there was evidence of a drift gillnet entanglement (different gear and fishery) in 2012. On this	Accepted (no score change, change to rationale)

								basis, we decided not to include this stock as an ETP scoring element in this assessment. This data and reasoning are explained more fully in the harmonization section of the report.	
Winter Skate and Little Skate	Sink Gillnet	PR A	2.3.3	No (scoring implications unknown)	No (scoring implications unknown)	NA	Potentially as above re NARW	Table 15 is excerpted from the MMPA List of Fisheries. Because of the concerns related to the declining population size of endangered North Atlantic Right Whales and because they appear on this list, we investigated the issue of documented interactions or evidence of entanglement and discovered the most recent positive sink gillnet entanglement was in the early 1990s, though there was evidence of a drift gillnet entanglement (different gear and fishery) in 2012. On this basis, we decided not to include this stock as an ETP scoring element in this assessment. This data and reasoning are explained more fully in the harmonization section of the report.	Accepted (no score change, change to rationale)

Winter Skate and Little Skate	Bottom Trawl	PR A	2.4.1	No (scoring implications unknown)	No (scoring implications unknown)	NA	<p>The rationale depends heavily on the NEFMC 2011 study of habitat impacts which is a large piece of work covering an enormous sea area. However that study appears to be quite broad, and little detail of habitats is provided in this assessment that pertain to the fishery under assessment. Moreover the NEFMC 2011 study acknowledges that a maximum recovery time of 10 years is assumed, and that this may be an underestimate for some habitats. I suspect it could well be a considerable underestimate in some cases given knowledge on some other communities, eg horse mussel beds, which might exist in some areas from the information presented. There is also no information on the range of trawl configurations used in what seems to be a wide range of fishing gears targeting different fish with skate often not the primary target as far as I can tell; there is no indication of whether heavy tickler chains are used in some, etc. Closed areas are mentioned but there is no real information on where these are or their effectiveness. The study strongly suggests that displacement fishing can mean that overall damage is higher when these are implemented without reduction in effort; however, it does not</p>	<p>Thank you for this comment. We have amended the scoring rationale to make it clear that, although we do not have more precise information about the habitat types over which the gillnets and trawlers are fishing (we do know the fishing areas, and that they are primarily inshore), we can see from the susceptibility/recovery analyses that there is a very low likelihood of serious or irreversible harm to any of the commonly encountered habitat types, and that virtually no fishing occurs in around the deep sea coral areas (protected by omnibus amendment from mobile bottom gears). Regarding the results of the study as pertains to closed area management, it does seem to strongly suggest reconsidering these MPAs, but to our knowledge, this has not actually been done, so our scoring is based on the status quo, which may not be as good as if the MPA siting were improved but is still good enough for us to judge the SG80 to be met for these fisheries.</p>	Accepted (no score change, change to rationale)
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							<p>automatically follow that this means that some fishing in closed areas is acceptable - the correct conclusion may be that effort reduction is necessary for environmental benefit; this assessment is not completely clear in what this study means for the MSC P2 requirements. Overall I suspect the conclusion on outcome may well be correct but more information/explanation is needed regarding the trawl fisheries which have the more potential of the two fishing methods to result in seabed impacts.</p>		
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.4.2	Yes	Yes	NA	I agree with the scoring and rationale	No response needed.	NA (No response needed)

Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.4.3	No (scoring implications unknown)	No (scoring implications unknown)	NA	See above comment 2.4.1 which applies also to information as well as outcome.	Thank you for this comment. We have amended the scoring rationale to make it clear that, although we do not have more precise information about the habitat types over which the gillnets and trawlers are fishing (we do know the fishing areas, and that they are primarily inshore), we can see from the susceptibility/recovery analyses that there is a very low likelihood of serious or irreversible harm to any of the commonly encountered habitat types, and that virtually no fishing occurs in around the deep sea coral areas (protected by omnibus amendment from mobile bottom gears). Regarding the results of the study as pertains to closed area management, it does seem to strongly suggest reconsidering these MPAs, but to our knowledge, this has not actually been done, so our scoring is based on the status quo, which may not be as good as if the MPA siting was improved, but is still good enough for us to judge the SG80 to be met for these fisheries.	Accepted (no score change, change to rationale)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.5.1	Yes	Yes	NA	I agree with the scoring and rationale	No response needed.	NA (No response needed)

Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.5.2	Yes	Yes	NA	I agree with the scoring and rationale	No response needed.	NA (No response needed)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	2.5.3	Yes	Yes	NA	I agree with the scoring and rationale	No response needed.	NA (No response needed)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	3.1.1	Yes	Yes	NA	I agree with the scoring and rationale	No response needed.	Accepted (no score change, change to rationale)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	3.1.2	Yes	Yes	NA	I agree with the scoring and rationale	No response needed.	Accepted (no score change, change to rationale)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	3.1.3	Yes	Yes	NA	I agree with the scoring and rationale	No response needed.	Accepted (no score change, change to rationale)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	3.2.1	Yes	No (scoring implications unknown)	NA	The rationale states that "These objectives are explicit in the management system, however it is not clear that these objectives are demonstrably consistent with achieving the outcomes expressed by MSC's Principles 1 and 2, therefore the SG80 is met for this scoring issue, but the SG100 is not met. " Whilst I neither agree nor disagree with this, the rationale does not indicate or give any examples of what it is that may be "unclear" or "not demonstrably consistent" and	Thank you for your comment. Additional rationale to support why the SG80 scoring level is met, but the SG100 level is not met was added to the rationale.	Accepted (no score change, additional evidence presented)

							hence why the 100 SG is not achieved.		
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	3.2.2	Yes	No (scoring implications unknown)	NA	As above, for SI3.2.2b it is clear why the 80 SG is met but not clear what factors may prevent the 100 from being met.	Thank you for your comment. Additional rationale to support why the SG80 scoring level is met, but the SG100 level is not met was added to the rationale.	Accepted (no score change, additional evidence presented)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	3.2.3	Yes	Yes	NA	I agree with the scoring and rationale	No response needed.	Accepted (no score change, change to rationale)
Winter Skate and Little Skate	Bottom Trawl and Sink Gillnet	PR A	3.2.4	Yes	Yes	Yes	I agree with the scoring and rationale	No response needed.	Accepted (no score change, change to rationale)

Table 24 Peer Reviewer B

Question	Yes/No	Peer Reviewer Justification (as given at initial Peer Review stage). Peer Reviewers should provide brief explanations for their 'Yes' or 'No' answers in this table, summarising the detailed comments made in the PI and RBF tables.	CAB Response to Peer Reviewer's comments (as included in the Public Comment Draft Report - PCDR)
Is the scoring of the fishery consistent with the MSC standard, and clearly based on the evidence presented in the assessment report?	Yes	<p>Generally, the scoring and rationale provided has been good and there are lots of references to supporting documents for the information and scoring.</p> <p>There were a couple of instances where some conflicting information about skate life history characteristics (1.1.1) and the use of size frequencies (1.2.1 and 1.2.3) were described that didn't quite match the conclusion or could perhaps use a little more explanation.</p> <p>There were only a couple of cases in which a table might have been in error relative to the supporting text for scoring (2.3.2(e) and 2.5.3(d)) and 3.2.3(b). These places should be checked for accuracy.</p> <p>There was some confusion about how the units of assessment were presented and scored in P1 and P2. Although the individual tables in P1 seemed to score species separately, only one score for each gear was presented in table 7.1 on p 19 (lumped across species somehow). Scores were identical for both species in P1 and for both gears in P2 so perhaps that is why, but some additional explanation may be required about this.</p>	The report has been corrected for consistency and clarity in terms of how the P2 UoAs are scored. In most cases, for the sake of simplicity a single score is given for both gear types that would be the more precautionary of the two scores if they were to be scored separately. For instance, for the ETP component we scored each PI on the basis of all ETP species scoring elements for both gears, even though the bottom trawl UoA has fewer ETP scoring elements than gillnet. Conversely, the habitats component has been scored for both gear types on the basis of the trawl impacts and management, as this is most precautionary and efficient.
<p>Are the condition(s) raised appropriately written to achieve the SG80 outcome within the specified timeframe?</p> <p>[Reference: FCP v2.2, 7.18.1 and sub-clauses]</p>	Yes	The conditions to achieve the SG80 outcome under 1.2.4 and 3.2.4 are appropriately written. I have no specific comments here.	No response needed.

Is the client action plan clear and sufficient to close the conditions raised? [Reference FCR v2.0, 7.11.2-7.11.3 and sub-clauses]		Note: Include this row for assessments completed against FCR v1.3 and v2.0, but not for FCP v2.1/v2.2 (in which the client action plan is only prepared at the same time as the peer review). Delete this text from the cell for FCR v1.3/v2.0 reviews or delete the whole row if FCP v2.1/v2.2.	
Enhanced fisheries only: Does the report clearly evaluate any additional impacts that might arise from enhancement activities?			

<p>Optional: General Comments on the Peer Review Draft Report (including comments on the adequacy of the background information if necessary). Add extra rows if needed below, including the codes in Columns A-C.</p>	NA	<p>The report is well written and understandable with only a few places where a typo or incomplete sentence was found.</p> <p>There did appear to be some errors in descriptions of which survey (spring vs autumn) is used for little and winter skate status determinations (p 23 and perhaps elsewhere). These need to be checked. My understanding from checking the original sources is that spring survey is used for little skate and autumn survey for the remaining skates. Also check Table 9 for truncated text in cells. I also found it puzzling that more added precaution was advocated for little skate due to high age at maturity (p 27) and not for winter skate whose age at maturity is even higher. Also, on p. 29 PRI is called out for little skate and not winter skate without much explanation. Disagreed that catch level below target catch levels is good evidence that stock is at a highly productive level, particularly when the stock is primarily used in bait in other fisheries that might be in various states, which would affect the bait demand and thus catch levels.</p> <p>I had a great deal of confusion about the naming of gears in these UofAs from the document. Various used terms were NE bottom trawl, sink gillnet, bottom trawl, NE sink gillnet, anchor/drift and sink float gillnet. Are there distinctions in these in either the UofAs or UofCs? There didn't seem to be but, if not, some uniformity in gear terminology should be provided. Broader names of the gears seemed to be used in describing the UofC than the UofA, which seems contradictory. Table 3 describing the UofCs also had UofA in the table instead of UofC - is this an error?</p> <p>Misc: P. 74 First sentence of last paragraph is missing a word. p. 85. last sentence before references has a problem.</p>	<p>Issues of gear naming inconsistency have hopefully been addressed and we have settled on "northeast bottom trawl" and "northeast sink gillnet." However, for "gear type" in the UoA/UoC definition we are required to choose from a dropdown list, where "northeast" is not part of the definition because it's not strictly a separate gear type. The distinction is important for the assessment, however, because bottom trawl and sink gillnet are used in mid-Atlantic and Southeast fisheries as well, and much of the information reported on fishery interactions is reported on a regional basis. These UoAs only operate these gears in the northeast region.</p>
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UoA stock	UoA gear	PR (A/B/C)	PI	PI Information	PI Scoring	PI Condition	Peer Reviewer Justification (as given at initial Peer Review stage)	CAB Response to Peer Reviewer's comments (as included in the Public Comment Draft Report - PCDR)	CAB Response Code
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Insert extra rows for P1 PIs if separate scores given for different UoA stocks	Insert extra rows for P2 PIs if separate scores given for different UoA gear types	Peer Reviewer (A/B/C)	Performance Indicator (PI)	Has all available relevant information been used to score this PI?	Does the information and/or rationale used to score this PI support the given score?	Will the condition(s) raised improve the fishery's performance to the SG80 level?	Peer reviewers (PRs) should provide support for their answers in the left three columns by referring to specific scoring issues and/or scoring elements, and any relevant documentation as appropriate. Additional rows should be inserted for any PIs where two or more discrete comments are raised, e.g. for different scoring issues, allowing CABs to give a different answer in each case. Paragraph breaks may also be made within cells using the Alt-return key combination. Detailed justifications are only required where answers given are one of the 'No' options. In other (Yes) cases, either confirm 'scoring agreed' or identify any places where weak rationales could be strengthened (without any implications for the scores).	CABs should summarise their response to the Peer Reviewer comments in the CAB Response Code column and provide justification for their response in this column. Where multiple comments are raised by Peer Reviewers with more than one row for a single PI, the CAB response should relate to each of the specific issues raised in each row. CAB responses should include details of where different changes have been made in the report (which section #, table etc.).	See codes page for response options
winter skate/little skate	bottom trawl/gill net	PR B	1.1.1	Yes	No (change to rationale expected, not to scoring)	NA	Scoring is agreed. Note that little skate status determination criteria are based on spring survey indices while winter skate are based on autumn indices (text needs editing to reflect this). Some puzzling and not well defined references to little skate as a high productivity stock need to be better supported. P. 27 cites high age of maturity for little skate as a concern but not for winter skate, which has even greater age at maturity. Why? p 29 PRI is called out for little skate and not winter skate. Is this because fishing is on immature individuals. Also catches less than target is presented as evidence that stock is highly productive but	The wording "highly productive" was chosen to mimic the wording of the criteria for this PI, but it seems to be a poor choice of words in the report/scoring justification. What was meant was high productivity, relative to a stock's potential, not that skates are highly productive relative to other species. This wording was edited considerably in the final report. Also, edits on this relative to p27 and p29 were made.	Accepted (no score change, change to rationale)

							many market forces could be governing that situation.		
winter skate/little skate	bottom trawl/gill net	PR B	1.1.2	Yes	Yes	NA	Scoring is agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	1.2.1	No (scoring implications unknown)	No (scoring implications unknown)	NA	Scoring seems appropriate. I note that reference is made to the use of size frequencies being used and monitored as part of TAL process (p 35) but I don't see size frequencies specifically called out as actually being used in the skate mgt. process anywhere so don't know if this would affect scoring if size frequencies are not actually used in the mgt process. This would seem to be an important source of information to see if there are changes in avg individual weight of individuals captured. Definitely appropriate not to give 100 level to either species for issues (b) and (f).	Reference to size frequencies was an error. It should have referred to discards. This was changed in the report and scoring rationale. A discussion of discards was added, as well.	Accepted (no score change, additional evidence presented)
winter skate/little skate	bottom trawl/gill net	PR B	1.2.2	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)

winter skate/little skate	bottom trawl/gill net	PR B	1.2.3	Yes	Yes	NA	Scoring agreed. Note that again size frequency information as cited as being used but it is not clear that is true based on the documentation specific to skates that were included. Also would like to see more emphasis on the importance of tracking systematic changes in survey availability of the different species (perhaps due to climate related factors) that might mask actual population trends and lead to overconfidence in the harvest strategy.	Reference to size frequencies was an error. It should have referred to discards. This was changed in the report and scoring rationale. A discussion of discards was added, as well. Also, the rationale now emphasizes the limits of the survey in the possible evolution of environmental factors such as climate change, as well as other additions	Accepted (no score change, change to rationale)
winter skate/little skate	bottom trawl/gill net	PR B	1.2.4	Yes	Yes	Yes	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.1.1	Yes	Yes	NA	Scoring agreed. Note that this section has some tables wherein the genus name of little and winter skate used is different than elsewhere in the document (Raja vs Leucoraja)	Thank you, this has been corrected (<i>Leucoraja</i> is correct).	Accepted (no score change, change to rationale)
winter skate/little skate	bottom trawl/gill net	PR B	2.1.2	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.1.3	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.2.1	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.2.2	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.2.3	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)

winter skate/little skate	bottom trawl/gill net	PR B	2.3.1	Yes	No (change to rationale expected, not to scoring)	NA	Scoring agreed. Initially I had concerns with the scoring of scoring issue (b) direct effects for turtles at 80, partly because the rationale provided cites the likelihood that most turtle interactions from the number estimated for the Mid Atlantic and NE sink gillnet fisheries as a whole are likely to be in the midAtlantic because of the warmer waters there. This does not recognize the possible interannual variability in northward incursions that could be more likely when warm water events/years in the NE region occur. However, after looking at the overall threats and current status of turtles. I am comfortable with this item as scored. However, it would be good to recognize in the document that estimation of turtle interactions in the NE area might have a bit more uncertainty because of this issue and because the skate bait fishery operates in the southern portion of the NE Atlantic management area.	Thank you for this comment. In light of this, we have added some rationale explaining why the 100 is not met, and also added a recommendation allowing us to monitor the extent to which these more northerly fisheries interact with these turtle species in light of climate change and other factors leading to the potential for increasing uncertainty in this assumption going forward.	Accepted (no score change, change to rationale)
winter skate/little skate	bottom trawl/gill net	PR B	2.3.2	Yes	No (scoring implications unknown)	NA	Scoring agreed. Again, there is mention in scoring issue (c) that loggerhead mortality is most likely in southern area that is not part of the UofA because of warmer waters. May want to recognize the uncertainty in this assessment because of interannual variability that is likely in warm water extension northward. For scoring issue (e) the table says SG80 is not met but the text supporting the table says that SG80 IS met. I am	Thank you for this comment. In light of this, we have added a recommendation under 2.3.1 allowing us to monitor the extent to which these more northerly fisheries interact with these turtle species in light of climate change and other factors leading to the potential for increasing uncertainty in this assumption going forward. The inconsistency between the score and rationale for scoring	Accepted (no score change, additional evidence presented)

							assuming the table is in error and needs to be fixed.	issue E has been fixed. The SG80 is met.	
winter skate/little skate	bottom trawl/gill net	PR B	2.3.3	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.4.1	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.4.2	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.4.3	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.5.1	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.5.2	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	2.5.3	Yes	No (scoring implications unknown)	NA	Scoring agreed if text for scoring issue (c) is correct that SG100 not met. If so, table for this scoring issue needs to be fixed.	The table has been fixed to reflect that SG100 is NOT met for scoring issue c. The overall score remains unchanged at 85.	Accepted (no score change, change to rationale)
winter skate/little skate	bottom trawl/gill net	PR B	3.1.1	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)

winter skate/little skate	bottom trawl/gill net	PR B	3.1.2	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	3.1.3	Yes	Yes	NA	Scoring agreed.	No response needed.	NA (No response needed)
winter skate/little skate	bottom trawl/gill net	PR B	3.2.1	Yes	Yes	NA	Scoring agreed.	No response needed. Additional rationale to support the scoring decision has been added as a result of PR A's comments.	Accepted (no score change, change to rationale)
winter skate/little skate	bottom trawl/gill net	PR B	3.2.2	Yes	Yes	NA	Scoring agreed.	No response needed. Additional rationale to support the scoring decision has been added as a result of PR A's comments.	Accepted (no score change, change to rationale)
winter skate/little skate	bottom trawl/gill net	PR B	3.2.3	Yes	Yes	NA	Scoring agreed. Scoring issue (a) needs to be explicit on p 155 about which details were used to make SG100=No determination. Scoring issue (b) description requires adding the word 'NOT' to the sentence on p 157 match the table determination of SG100=NO.	Additional rational has been added for scoring issue a. The text has been revised for both scoring issue a and scoring issue b to match the determination that SG100 was not met.	Accepted (no score change, additional evidence presented)
winter skate/little skate	bottom trawl/gill net	PR B	3.2.4	Yes	Yes	Yes	Scoring agreed.	No response needed.	Accepted (no score change, change to rationale)

Table 25 Peer Reviewer C

Question	Yes/No	Peer Reviewer Justification (as given at initial Peer Review stage). Peer Reviewers should provide brief explanations for their 'Yes' or 'No' answers in this table, summarising the detailed comments made in the PI and RBF tables.	CAB Response to Peer Reviewer's comments (as included in the Public Comment Draft Report - PCDR)
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Is the scoring of the fishery consistent with the MSC standard, and clearly based on the evidence presented in the assessment report?	Yes	The scoring is consistent with the MSC standard and is directly based on evidence documented in the report. Some specific scoring issues needing further clarification are noted in the PI table.	No response needed.
Are the condition(s) raised appropriately written to achieve the SG80 outcome within the specified timeframe? [Reference: FCP v2.2, 7.18.1 and sub-clauses]	Yes	The two conditions are appropriately written with reasonable timelines.	No response needed.
Is the client action plan clear and sufficient to close the conditions raised? [Reference FCR v2.0, 7.11.2-7.11.3 and sub-clauses]		Note: Include this row for assessments completed against FCR v1.3 and v2.0, but not for FCP v2.1/v2.2 (in which the client action plan is only prepared at the same time as the peer review). Delete this text from the cell for FCR v1.3/v2.0 reviews or delete the whole row if FCP v2.1/v2.2.	
Enhanced fisheries only: Does the report clearly evaluate any additional impacts that might arise from enhancement activities?	NA		
Optional: General Comments on the Peer Review Draft Report (including comments on the adequacy of the background information if necessary). Add extra rows if needed below, including the codes in Columns A-C.	NA	The report is clearly and thoroughly written. The background provides a comprehensive description of the fishery and its biological, ecological and management context.	No response needed.

UoA stock	UoA gear	PR (A/B/C)	PI	PI Information	PI Scoring	PI Condition	Peer Reviewer Justification (as given at initial Peer Review stage)	CAB Response to Peer Reviewer's comments (as included in the Public Comment)	CAB Response Code
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								Draft Report - PCDR)	
Insert extra rows for P1 PIs if separate scores given for different UoA stocks	Insert extra rows for P2 PIs if separate scores given for different UoA gear types	Peer Reviewer (A/B/C)	Performance Indicator (PI)	Has all available relevant information been used to score this PI?	Does the information and/or rationale used to score this PI support the given score?	Will the condition(s) raised improve the fishery's performance to the SG80 level?	Peer reviewers (PRs) should provide support for their answers in the left three columns by referring to specific scoring issues and/or scoring elements, and any relevant documentation as appropriate. Additional rows should be inserted for any PIs where two or more discrete comments are raised, e.g. for different scoring issues, allowing CABs to give a different answer in each case. Paragraph breaks may also be made within cells using the Alt-return key combination. Detailed justifications are only required where answers given are one of the 'No' options. In other (Yes) cases, either confirm 'scoring agreed' or identify any places where weak rationales could be strengthened (without any implications for the scores).	CABs should summarise their response to the Peer Reviewer comments in the CAB Response Code column and provide justification for their response in this column. Where multiple comments are raised by Peer Reviewers with more than one row for a single PI, the CAB response should relate to each of the specific issues raised in each row. CAB responses should include details of where different changes have been made in the report (which section #, table etc).	See codes page for response options
Winter and little skate	Trawl and gillnet	PR C	1.1.1	Yes	Yes	NA	Scoring agreed. Is the TRP = MSY? In section b add Bmsy proxy as TRP for Winter skate. In section B, "As noted in 1.1.1" should be 1.1.1.a	TRP is a Take Reduction Plan which relates more to P2 than 1.1.1. Other edits suggested by Reviewer were made.	Accepted (no score change, change to rationale)
Winter and little skate	Trawl and gillnet	PR C	1.1.2	NA (PI not scored)	NA (PI not scored)	NA (PI not scored)	NA	No response needed.	NA (No response needed)

Winter and little skate	Trawl and gillnet	PR C	1.2.1	Yes	Yes	NA	<p>Scoring agreed.</p> <p>Rationales for Winter and Little skates' failure to meet SG 100 in sections a, b and f are well presented.</p> <p>Rationale in section f could be strengthened by noting the mostly unobserved nature of the discards and the primary reliance on voluntary recording at sea as the basis of discard rate estimation.</p>	Rationale for f improved per Reviewer's suggestion	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	1.2.2	Yes	Yes	NA	Scoring agreed. Issues related to discard data and estimation of discard rates are well addressed in the PI.	Scoring Agreed, no response needed	NA (No response needed)
Winter and little skate	Trawl and gillnet	PR C	1.2.3	Yes	Yes	NA	Scoring agreed. The rationales for a,b, and c are thorough and complete.	Scoring Agreed. Some additions to the rationale were made.	NA (No response needed)
Winter and little skate	Trawl and gillnet	PR C	1.2.4	Yes	No (scoring implications unknown)	Yes	In section e it is noted that the assessment approach was externally and internally reviewed by the Data Poor Workshop in 2008. However, an external review of the assessment approach is not necessarily the same as an external review of the assessment itself. Age of review may also be an issue. Further explanation is warranted.	Further rationale for 1.2.4e was introduced into the PI justification	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	2.1.1	Yes	Yes	NA	Scoring agreed and rationale is complete	No response needed.	NA (No response needed)

Winter and little skate	Trawl and gillnet	PR C	2.1.2	Yes	Yes	NA	<p>Scoring agreed and rationale is complete.</p> <p>The uncertainties related to the barndoor skate assessment are well described in sections b and c. The shark finning discussion (section d) is particularly thorough and informative.</p> <p>In section e, "operanalization" needs replacement: operationalization?</p>	Thank you for these comments, and we have corrected the typo.	Accepted (no score change, change to rationale)
Winter and little skate	Trawl and gillnet	PR C	2.1.3	Yes	Yes	NA	<p>Scoring agreed and rationale is complete.</p> <p>In rationale for section c, replace "be" with "met"</p>	Thank you for these comments, and we have corrected the typo.	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	2.2.1	Yes	Yes	NA	<p>Scoring agreed.</p> <p>Rationale in section a does a good job of presenting each species' global status as well as local interactions with the fishery</p>	No response needed.	NA (No response needed)
Winter and little skate	Trawl and gillnet	PR C	2.2.2	Yes	Yes	NA	Scoring agreed and ationale is complete	No response needed.	NA (No response needed)
Winter and little skate	Trawl and gillnet	PR C	2.2.3	Yes	Yes	NA	Scoring agreed and rationale is complete	No response needed.	NA (No response needed)
Winter and little skate	Trawl and gillnet	PR C	2.3.1	Yes	Yes	NA	<p>Scoring agreed and rationale is complete.</p> <p>Good use of literature to support rationale.</p>	No response needed.	NA (No response needed)

Winter and little skate	Trawl and gillnet	PR C	2.3.2	Yes	No (scoring implications unknown)	NA	In section e, the scoring rationale is inconsistent with the "no" at the SG 80 level. In rationale for section d, change "n" to "in"	Thank you. We have fixed the inconsistency and a score of 80 remains. Typo fixed	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	2.3.3	Yes	Yes	NA	Scoring agreed and rationale is complete	No response needed.	NA (No response needed)
Winter and little skate	Trawl and gillnet	PR C	2.4.1	Yes	No (change to rationale expected, not to scoring)	NA	Scoring agreed. Section a needs rationale for why the SG100 is not met.	Thank you, rationale has been so added.	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	2.4.2	Yes	No (change to rationale expected, not to scoring)	NA	Scoring is agreed. A statement is needed in the section a rationale re meeting the SG80 but not meeting the SG100.	Thank you, rationale has been so added.	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	2.4.3	Yes	Yes	NA	Scoring agreed and rationale is complete	No response needed.	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	2.5.1	Yes	Yes	NA	Scoring agreed and rationale is complete	No response needed.	NA (No response needed)
Winter and little skate	Trawl and gillnet	PR C	2.5.2	Yes	Yes	NA	Scoring agreed and rationale is substantively complete. In section c, "but not SG100" should be added.	The needed text has been so added.	Accepted (no score change, change to rationale)

Winter and little skate	Trawl and gillnet	PR C	2.5.3	Yes	No (scoring implications unknown)	NA	In section d, scoring is inconsistent with scoring statement in rationale.	The table has been fixed to reflect that SG100 is NOT met for scoring issue c. The overall score remains unchanged at 85.	Accepted (no score change, change to rationale)
Winter and little skate	Trawl and gillnet	PR C	3.1.1	Yes	Yes	NA	Scoring agreed and rationale is complete	No response needed.	Accepted (no score change, change to rationale)
Winter and little skate	Trawl and gillnet	PR C	3.1.2	Yes	Yes	NA	The information provided supports the assigned score, but the rationale for section a would be strengthened by noting the specified roles and responsibilities of NEFMC advisory bodies. In particular, all councils are required by MSRA to maintain Scientific and Statistical Committees, which have a range of responsibilities including reviewing scientific analyses and making recommendations on ABC.	Thank you for your comment. Additional rationale has been added to this scoring issue and to the background section on the NEFMC process in the Principle 3 section of the report.	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	3.1.3	Yes	Yes	NA	The information provided describes long-term objectives for federal management policy but to be specific to policy at the NEFMC level it needs the addition of any specific long-term objectives in place at the NEFMC.	Additional objectives specifically related to the NEFMC have been added to the rationale.	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	3.2.1	Yes	Yes	NA	Scoring is agreed and rationale is complete	No response needed.	Accepted (no score change, change to rationale)

Winter and little skate	Trawl and gillnet	PR C	3.2.2	Yes	No (scoring implications unknown)	NA	Section d describes processes for stakeholder input but it is unclear whether policies or practices exist requiring the Council to respond to stakeholder concerns, advisory body recommendations or research recommendations	Additional rationale has been added to this scoring issue.	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	3.2.3	Yes	No (change to rationale expected, not to scoring)	NA	Scoring agreed. Scoring statement is missing for section a In section b, the statement "the SG100 level is met" should be "the SG100 level is not met" The rationale provides an excellent description of the enforcement system and its operation.	Thank you for your comment. The correction to the scoring statement was made to 3.2.3b.	Accepted (no score change, additional evidence presented)
Winter and little skate	Trawl and gillnet	PR C	3.2.4	Yes	Yes	Yes	Scoring agreed and rationale is complete. In Condition 2, Year 4, the word "occurs" is misplaced.	The text in the Condition table has been revised.	Accepted (no score change, additional evidence presented)

12.4 Stakeholder input

To be drafted at Client and Peer Review Draft Report

To be completed at Public Certification Report

MRAG Americas received qualifying stakeholder comments from the MSC (Technical Oversight) and NEFMC.

MSC Technical Oversight comments are given below, together with CAB responses

Page Reference	Grade	Requirement Version	OversightDescription	CABComment
20	Guidance	FCP-7.9.2.1 v2.1	Please determine the parties eligible to use the fishery certificate. P. 20 Section 6.3 discussed processing plants (multiple) that are part of the client group, and external federally licensed dealer to be covered within the fishery certificate however, it is not known who are these parties. Please identify the eligible processing plants and dealers.	Thank you, the eligible processing plant and dealer have been identified.
20	Guidance	FCP-7.9.1.1 v2.1	Please confirm the systems in place to identify certified from non-certified species, in order to ensure traceability back to the UoC. Tables 11 & 12 Gillnet and Trawl catch composition data identified non-UoC skates harvested; Table 6 Row 3 discussed difficulty in distinguishing (winter and little skate) UoC species but no confirmation on how UoC species are effectively identified and segregated from non-UoC species to ensure traceability. Please confirm.	Thank you, this has now been confirmed. There is no difficulty in distinguishing between any of the other skate species.

Comments from NEFMC are listed in the table below together with the CAB responses. Comments were also received by WWF; however these are not qualifying because WWF had not previously been involved in the assessment as a stakeholder (per FCP 7.20.8.1). We will consider WWF's comments at a later stage. No stakeholder comments were provided on templates, so the assessment team had to improvise with the table below.

Organization	Stakeholder Comments	CAB response
New England Fishery Management Council (NEFMC)	<i>For six of the seven skate species including winter skate, indices of relative abundance and stock status determinations are derived from the fall bottom trawl survey. The spring survey is used for little skate. There are a few statements in the draft report that are incorrect in terms of which survey is used for a particular species (e.g., on pages 32 and 33).</i>	Thank you for the comments. We were remiss in not adequately defining the index sources as they are discussed in the stock status sections, especially the executive summary. These are now clarified in the text.
NEFMC	<i>There could be more clarity throughout the draft on the specific skate species referred to. In the Executive Summary, for example, the last paragraph of page 10 includes text on the threshold and target biomass for a stock and that the index has been above the target eight years out of eighteen years, but it is unclear whether this stock is little or winter skate.</i>	As above, thank you for the comments. We were remiss in not adequately defining the index sources as they are discussed in the stock status sections, especially the executive summary. These are now clarified in the text.
NEFMC	<i>The Executive Summary states that under the harvest control rule as the survey index declines and approaches or goes below the threshold, catch levels are reduced (page 11). While this is true, the text might give the impression that catch reductions would be implemented immediately. The NMFS Regional Administrator could take emergency action to lower catch levels, but this response would be unusual. Normally, catch levels are adjusted through the Council process of setting specifications, which includes peer-review by the Council's Scientific and Statistical Committee.</i>	Thank you. This point is now clarified in the Executive Summary. The key point we make though, is that there is a normal process to adjust catches based upon the status determinations. And if, the there were to be a large change in status, the system has the mechanism to address it. Thanks.
NEFMC	<i>Section 8.8.1 Stock Assessment and Recovery indicates that thorny skate "is in recovery" (page 38). This could be misleading and should be clarified. As later</i>	This was clarified in the text, using your wording. Thanks. The key point to be made is that the aggregated catch targets probably work reasonably well for

Organization	Stakeholder Comments	CAB response
	<i>explained on page 156, thorny skate has been in a rebuilding plan since the original skate FMP was established in 2003. While it is true that the 2017-2019 thorny skate index is above the 2016-2018 index by 11.4%, biomass is only at 4.3% of the BMSY target after 17 years into the rebuilding period and eight years from the rebuilding deadline in 2028.</i>	MSC certification criteria for winter and little skate, thus fulfilling those criteria, but not necessarily for thorny skate, which is outside this certification.
NEFMC	<i>In Section 10.2, there is reference to a “2021 skate assessment” (page 161). The Northeast Fisheries Science Center (NEFSC) had been planning to conduct a management track assessment in 2021, but as the NEFSC bottom trawl survey was cancelled in 2020, the schedule for all NEFSC stock assessment was reevaluated this fall. As a result, a management track assessment for skates has been postponed, and as in recent years, the NEFSC will be updating the survey indices and catch information, using 2019 as the terminal year with input from the Council’s Skate Plan Development Team (PDT).</i>	Thank you for your comment. The clarification text included in this comment has been added as a footnote to the 3.2.3 scoring table.
NEFMC	<i>The New England Fishery Management Council manages all seven skate species, not just winter and little skate. This should be clarified throughout the draft report as it suggests the Council primarily manages just the two species. For example, page 26 states, “Effectively, the management is addressing winter and little skate as a primary objective with some accounting for the other species.”</i>	Thank you. This MSC certification addresses two of those species: Winter and Little skate. Thus, justifications and Council actions being discussed here are relevant to those two species. The limitation of aggregate species approaches is always that some species are “lost in the shuffle”. The argument we are making is that because these two species are dominant, then aggregate approaches that address these two species are sufficiently responsive to the management procedures. It is less likely that for the other species, this is so. But for our MSC P1 purposes this is

Organization	Stakeholder Comments	CAB response
		irrelevant. So, we would argue that the pragmatic result of the aggregate management approach is as we stated. However, we are sensitive to the issue and have provided rewording.
NEFMC	The method for setting the level of state landings could be clarified. Page 30 states, "TALs are set according to procedures that assume that future discards would be equivalent to the average rate from the most recent three years; state landings would approximate to 3.45% of the total landings". However, like discards, state landings are set at a level equal to the average state landings from the most recent three years, and not at a fixed percentage of the total landings in a given fishing year.	Thank you. This is now clarified.
NEFMC	We suggest clarifying what is meant by an "external review of a management system." On page 142, the term is defined as reviews by the Department of Commerce and NOAA General Counsel of Council actions, reviews by the Center for Independent Experts, and those related to legal challenges. As defined, this FMP has been externally reviewed many times (e.g., DOC review of Council recommendations is standard). However, the report concludes that the Northeast Skate Complex FMP has not been externally reviewed, and this is identified as a weakness in the report. The last paragraph on page 142 explains a recent NMFS effort to have its science programs peer reviewed. How that is relevant or may be an opportunity for a review of a management program is unclear.	<p>Thank you for your comment. This has been an area of confusion for many fisheries, and because of the ambiguity of the requirement, there are a lot of inconsistencies with the scoring of this performance indicator. We have asked the MSC for further guidance on what constitutes external review, but essentially it is external review of the fishery-specific management system as a whole, not just the stock assessments or the FMP.</p> <p>The MSC GSA4.10.1 defines 'external review' as <i>external to the fisheries management system, but not necessarily international. Depending on the scale and intensity of the fishery, it could be by:</i></p> <ul style="list-style-type: none"> • <i>Another department within an agency;</i> • <i>Another agency or organization within the country;</i> • <i>A government audit that is external to the fisheries management agency;</i>

Organization	Stakeholder Comments	CAB response
		<ul style="list-style-type: none"> • <i>A peer organization nationally or internationally, and</i> • <i>External expert reviewers.</i> <p>To the assessment team's understanding, NOAA is the scientific agency within the Department of Commerce (DOC), which supports the requirement of regular internal review. If you can provide evidence of another department of the DOC that performs review of NMFS, or the Council's Management System, then that would suffice as external review.</p> <p>In regard to the last paragraph on page 142, it was included to support the rationale that there is some external review occurring in the fishery specific management system. Additional rationale was added to Section 10.1.12 for this scoring indicator.</p>
NEFMC	<p>As an aside, since the Northeast Skate Complex Annual Monitoring Report is cited throughout the draft report, the Council decided in September 2020 to not create a Northeast Skate Complex Annual Monitoring Report in 2021. Rather, all the data and information typically included in this annual report (e.g., survey indices, fishery catches) will be folded into other Council documents that are being prepared this year: the skate fishery specifications for 2022-2023 and the ongoing Amendment 5 action. This decision will be revisited in future years and may depend on what other documents are being prepared at the time.</p>	<p>Clarification has been added to section 10.1 and 10.2.</p>
NEFMC	<p>We are not aware of any evidence that a lack of monitoring and enforcement is hindering the rebuilding of thorny skate. If such evidence exists, it should be cited in the</p>	<p>Thank you for your comment. The assessment team agrees that the issue of the thorny skate biomass is more suited for other scoring issues. The rationale has been removed from this scoring</p>

Organization	Stakeholder Comments	CAB response
	report. If it does not currently exist, the conclusion in Section 10.2 (page 161) should be reconsidered.	indicator and the score has been revised.
NEFMC	Furthermore, the report concludes that the following guidepost has not been met: "Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence" (page 161). This conclusion should also be better supported. The rationale for the conclusion is that because seven of the 12 enforcement cases in 2017-2020 that relate to the skate fishery are still unresolved, "it cannot be said with confidence that sanctions demonstrably provide effective deterrence" (page 162). Twelve cases in over three years are very few for a fishery such as skates (e.g., over 14,000 trips landed skate in Fishing Year 2018), and there will almost always be open cases if a report is written before the conclusion of the last year of such a time series. A conclusion of 'likely yes but uncertain' would be more appropriate than simply 'no.'	Additional rationale has been added for this scoring issue.

12.5 Conditions

To be drafted from Client and Peer Review Draft Report

Table 26 Condition 1

Performance Indicator	1.2.4
Score	75
Justification	<p>1.2.4.c. Major sources of uncertainty have been noted (Section 7.2.1), thus SG 60 is met. However, the assessment does not take into account many of the uncertainties. The pragmatic specifications of overfishing and overfished levels were chosen appropriately; however, they have not been clearly related to stock productivity. The uncertainties in biological productivity, distribution, reproduction and mortality have not been explored since the Data Poor Workshop (2008). Alternative assessment analysis methods might be explored to reduce this uncertainty which can then be related to the index monitoring methods or suggest other approaches. But currently, the assessment does not take into account the uncertainties. Characterizing uncertainty in the assessment should be related to the harvest strategy and control rule. The index, itself, has been reviewed and modified, but the basic relationship of the uncertainties in the linkage of productivity to the assessment has not. Currently SG 80 is not met.</p>
Condition	<p>Evidence shall be presented to show that here is an adequate assessment of the stock status that takes uncertainty into account (1.2.4.c). Additionally, the assessment shall be appropriate for both the stock and for the harvest control rule; and estimates stock status relative to reference points that are appropriate to the stock; and can be estimated.</p>
Milestones	<p>Year 1 Surveillance (2022). (<i>Condition 1-2 PI 1.2.4</i>) The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>Year 2 Surveillance (2023) (<i>Condition 1-2 PI 1.2.4</i>) The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>Year 3 Surveillance (2024). (<i>Condition 1-2 PI 1.2.4</i>) The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>Year 4 Surveillance (2025). (<i>Condition 1-2 PI 1.2.4</i>) The fishery shall report on results which address uncertainty in the assessment and the assessment approaches and how they support the harvest strategy.</p>
Consultation on condition	<p>The CAB has verified that any parties implicated in the execution of the client action plan have been notified, including by the assessment team during the site visit, and as the plans required for the first milestone evolve, the assessment team expects to verify at the first annual audit that any actions implicating entities besides the client have been agreed with their involvement.</p>

Table 27 Condition 2

Performance Indicator	3.2.4 Monitoring and management performance evaluation
Score	70
Justification	Please refer to page 161 of this report.
Condition	By year 4, evidence needs to be provided that the fishery-specific management system is subject to occasional external review.
Milestones	<p>Year 1 Surveillance (2022). By the first annual audit (2022), the fishery needs to demonstrate that they have a plan to ensure occasional, external review of the fishery specific management system for the Southern New England Winter and Little skate fishery.</p> <p>Year 2 Surveillance (2023) By the second annual audit the fishery will show that the plan is progressing according to schedule.</p> <p>Year 3 Surveillance (2024). By the third annual audit (2024) the fishery will show that the plan is progressing according to schedule.</p> <p>Year 4 Surveillance (2025). By the fourth annual audit (2025) the fishery will demonstrate that occasional external review of the fishery specific management system occurs for the Southern New England Winter and Little skate fishery.</p>
Consultation on condition	The CAB has verified that any parties implicated in the execution of the client action plan have been duly notified, and as the plans required for the first milestone evolve, the assessment team expects to verify at the first annual audit that any actions implicating entities besides the client have been agreed with their involvement.

12.6 Client Action Plan

Marine Stewardship Council fisheries assessments

U.S. Southern New England Winter and Little Skate MSC Client Action Plan

Introduction

This template has been developed by the Marine Stewardship Council.

This template is for fishery clients to use to develop their Client Action Plans.

Please contact standards@msc.org if you have any questions.

The Client Action Plan needs to include:

- A description of the actions that will be implemented by the client, and other parties (where relevant) to achieve milestones and conditions.
- Roles and responsibilities for implementing and completing actions.
- The specified timeframe within which the conditions and milestones will be addressed.
- The outputs that will be provided to the assessment team to demonstrate that milestones are achieved and progress towards meeting conditions is being made.

Please complete all unshaded fields. Where instructions are included in italics, please delete and replace with your specific information.

Fishery name	U.S. Southern New England Winter and Little Skate
Report author	Dana Barker
Report author association	Providence Bay Fish Company Quality Control and MSC Coordinator
Client name	Providence Bay Fish Company and Nebula Foods
Client contact person	Dana Barker
Date of Client Action Plan	11/24/20

Summary of conditions

The report should include a table summarising conditions raised by the CAB in the assessment. This information can be found in Client and Peer Review Draft Report assessment.

Table X – Summary of conditions			
Condition number	Condition	Performance Indicator (PI)	Deadline
1	Evidence shall be presented to show that there is an adequate assessment of the stock status that takes uncertainty into account (1.2.4.c). Additionally, the assessment shall be appropriate for both the stock and for the harvest control rule; and estimates stock status relative to reference points that are appropriate to the stock; and can be estimated.	1.2.4	<p>Year 1 Surveillance (Q1 2022). (Condition 1-2 PI 1.2.4) The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>Year 2 Surveillance (Q1 2023) (Condition 1-2 PI 1.2.4) The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>Year 3 Surveillance (Q1 2024). (Condition 1-2 PI 1.2.4) The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>Year 4 Surveillance (Q1 2025). The fishery shall report on results which address uncertainty in the assessment and the assessment approaches and how they support the harvest strategy.</p>
2	By year 4, evidence needs to be provided that the fishery-specific management system is subject to occasional external review.	3.2.4	<p>Year 1 Surveillance (2022). By the first annual audit (2022), the fishery needs to demonstrate that they have a plan to ensure occasional, external review of the fishery specific management system for the Southern New England Winter and Little skate fishery.</p> <p>Year 2 Surveillance (2023) By the second annual audit the fishery will show that the plan is progressing according to schedule.</p> <p>Year 3 Surveillance (2024). By the third annual audit (2024) the fishery will show that the plan is progressing according to schedule.</p> <p>Year 4 Surveillance (2025). By the fourth annual audit (2025) the fishery will demonstrate that occasional external review of the fishery specific management system for occurs for the Southern New England Winter and Little skate fishery.</p>

Action plan

The report should include:

- a. Completed tables for all Performance Indicators (PIs) that have conditions assigned to them in the Client and Peer Review Draft Report.
- b. A new table should be completed for each PI with a condition.

Table X - PI 1.2.4

1	Condition number
	- 1
2	Performance Indicator(s)
	1.2.4
3	Score
	- 75
4	Condition(s)
	Evidence shall be presented to show that here is an adequate assessment of the stock status that takes uncertainty into account (1.2.4.c). Additionally, the assessment shall be appropriate for both the stock and for the harvest control rule; and estimates stock status relative to reference points that are appropriate to the stock; and can be estimated.
5	Milestone(s)
	<p>Year 1 Surveillance The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>-</p> <p>Year 2 Surveillance The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>-</p> <p>Year 3 Surveillance The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.</p> <p>-</p> <p>Year 4 Surveillance The fishery shall report on results which address uncertainty in the assessment and the assessment approaches and how they support the harvest strategy</p>
6	Summary of action plan

	<p>The clients will follow and work with NEFMC to promote and show that there is an adequate assessment of the stock status</p> <p>that takes uncertainty into account (1.2.4.c). Additionally, the assessment shall be appropriate for both the stock and for the harvest control rule; and estimates stock status relative to reference points that are appropriate to the stock; and can be estimated.</p>	
Milestone	Action	Roles & Responsibilities
Identify milestone	Enter the tasks and actions that you will implement to address the milestone	<p>For each action identify the key lead – the person, group or organisation responsible for completing the action.</p> <p>Identify other entities – other people, group or organisations who are involved in completing tasks and actions e.g. fisheries management or research agencies, authority or regulating bodies</p>
Year 1 Surveillance The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.	Through involvement in NEFMC the clients will promote and advocate that the uncertainties in the assessment of the fishery are addressed and that they are in support of the harvest strategy.	<p>A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico.</p> <p>NEFMC</p>
Year 2 Surveillance The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.	Through involvement in NEFMC the clients will promote and advocate that the uncertainties in the assessment of the fishery are addressed and that they are in support of the harvest strategy	<p>A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico.</p> <p>NEFMC</p>
Year 3 Surveillance The fishery shall report on efforts to address uncertainty in the assessment and in the assessment approaches in support of the harvest strategy.	Through involvement in NEFMC the clients will promote and advocate that the uncertainties in the assessment of the fishery are addressed and that they are in support of the harvest strategy	<p>A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico.</p> <p>NEFMC</p>
Year 4 Surveillance The fishery shall report on results which address uncertainty in the assessment and the assessment approaches and how they support the harvest strategy	Through involvement in NEFMC the clients will promote and advocate that the uncertainties in the assessment of the fishery are addressed and that they are in support of the harvest strategy	<p>A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico.</p> <p>NEFMC</p>

Table X - PI 3.2.4

1	Condition number
	- 2
2	Performance Indicator(s)
	3.2.4
3	Score
	- 70
4	Condition(s)
	By year 4, evidence needs to be provided that the fishery-specific management system is subject to occasional external review.
5	Milestone(s)
	<p>Year 2 Surveillance (2022) By the second annual audit the fishery will show that the plan is progressing according to schedule.</p> <p>Year 3 Surveillance (2023). By the third annual audit the fishery will show that the plan is progressing according to schedule.</p> <p>Year 4 Surveillance (2024). By the fourth annual audit the fishery will demonstrate that occasional external review of the fishery specific management system occurs for the Southern New England Winter and Little skate fishery.</p>
6	Summary of action plan
	The client will advocate

Milestone	Action	Roles & Responsibilities	Outputs
Identify milestone	Enter the tasks and actions that you will implement to address the milestone	<p>For each action identify the key lead – the person, group or organisation responsible for completing the action.</p> <p>Identify other entities – other people, groups or organisations who are involved in completing tasks and actions e.g., fisheries management or research agencies, authorities or regulating bodies</p>	Identify what outputs will be presented to the CAB to demonstrate the milestone has been met

Year 1 Surveillance (2021). By the first annual audit the fishery needs to demonstrate that they have a plan to ensure occasional, external review of the fishery specific management system for the Southern New England Winter and Little skate fishery.	Through the clients' involvement with NEFMC and opportunities for public comment to NOAA, the client will advocate for more clearly set up systems for external review of the Southern New England Winter and Little Skate Fishery.	A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico. NEFMC	An updated brief of efforts by the client and proposals and changes in systems NOAA and NEFMC are considering or implementing.
Year 2 Surveillance (2022) By the second annual audit the fishery will show that the plan is progressing according to schedule	Through the clients involvement with NEFMC and opportunities for public comment to NOAA, the client will advocate for more clearly set up systems for external review of the Southern New England Winter and Little Skate Fishery.	A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico. NEFMC	An updated brief of efforts by the client and proposals and changes in systems NOAA and NEFMC are considering or implementing.
Year 3 Surveillance (2023). By the third annual audit the fishery will show that the plan is progressing according to schedule.	Through the clients involvement with NEFMC and opportunities for public comment to NOAA, the client will advocate for more clearly set up systems for external review of the Southern New England Winter and Little Skate Fishery.	A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico. NEFMC	An updated brief of efforts by the client and proposals and changes in systems NOAA and NEFMC are considering or implementing.
Year 4 Surveillance (2024). By the fourth annual audit the fishery will demonstrate that occasional external review of the fishery specific management system occurs for the Southern New England Winter and Little skate fishery.	Through the clients involvement with NEFMC and opportunities for public comment to NOAA, the client will advocate for more clearly set up systems for external review of the Southern New England Winter and Little Skate Fishery.	A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico. NEFMC	An updated brief of efforts by the client and proposals and changes in systems NOAA and NEFMC are considering or implementing.

Table X - PI 3.2.4

1	Condition number
	- 2
2	Performance Indicator(s)
	3.2.4
3	Score
	- 70

4	Condition(s)
	By year 4, evidence needs to be provided that the fishery-specific management system is subject to occasional external review.
5	Milestone(s)
	<p>Year 2 Surveillance (2022) By the second annual audit the fishery will show that the plan is progressing according to schedule.</p> <p>Year 3 Surveillance (2023). By the third annual audit the fishery will show that the plan is progressing according to schedule.</p> <p>Year 4 Surveillance (2024). By the fourth annual audit the fishery will demonstrate that occasional external review of the fishery specific management system occurs for the Southern New England Winter and Little skate fishery.</p>
6	Summary of action plan
	The client will advocate

Milestone	Action	Roles & Responsibilities	Outputs
Identify milestone	Enter the tasks and actions that you will implement to address the milestone	<p>For each action identify the key lead – the person, group or organisation responsible for completing the action.</p> <p>Identify other entities – other people, groups or organisations who are involved in completing tasks and actions e.g. fisheries management or research agencies, authorities or regulating bodies</p>	Identify what outputs will be presented to the CAB to demonstrate the milestone has been met
Year 1 Surveillance (2021). By the first annual audit the fishery needs to demonstrate that they have a plan to ensure occasional, external review of the fishery specific management system for the Southern New England Winter and Little skate fishery.	Through the clients involvement with NEFMC and opportunities for public comment to NOAA, the client will advocate for more clearly set up systems for external review of the Southern New England Winter and Little Skate Fishery.	<p>A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico.</p> <p>NEFMC</p>	An updated brief of efforts by the client and proposals and changes in systems NOAA and NEFMC are considering or implementing.
Year 2 Surveillance (2022) By the second annual audit the fishery will show that the plan is progressing according to schedule	Through the clients' involvement with NEFMC and opportunities for public comment to NOAA, the client will advocate for more clearly set up systems for external review of the Southern New England Winter and Little Skate Fishery.	<p>A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico.</p> <p>NEFMC</p>	An updated brief of efforts by the client and proposals and changes in systems NOAA and NEFMC are considering or implementing.

Year 3 Surveillance (2023). By the third annual audit the fishery will show that the plan is progressing according to schedule.	Through the clients' involvement with NEFMC and opportunities for public comment to NOAA, the client will advocate for more clearly set up systems for external review of the Southern New England Winter and Little Skate Fishery.	A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico. NEFMC	An updated brief of efforts by the client and proposals and changes in systems NOAA and NEFMC are considering or implementing.
Year 4 Surveillance (2024). By the fourth annual audit the fishery will demonstrate that occasional external review of the fishery specific management system occurs for the Southern New England Winter and Little skate fishery.	Through the clients involvement with NEFMC and opportunities for public comment to NOAA, the client will advocate for more clearly set up systems for external review of the Southern New England Winter and Little Skate Fishery.	A representative of Nebula Foods and or Providence Bay Fish Company - Currently Pedro Conceico. NEFMC	An updated brief of efforts by the client and proposals and changes in systems NOAA and NEFMC are considering or implementing.

12.7 Surveillance

To be drafted from Client and Peer Review Draft Report

Table 28 Fishery surveillance program

Surveillance level	Year 1	Year 2	Year 3	Year 4
e.g. Level 5	e.g. On-site surveillance audit	e.g. On-site surveillance audit	e.g. On-site surveillance audit	e.g. On-site surveillance audit & re-certification site visit
Level 4	On-site	Off-site	Off-site	On-site surveillance audit and recertification site visit

Table 29 Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
e.g. 1	e.g. May 2018	e.g. July 2018	e.g. Scientific advice to be released in June 2018, proposal to postpone audit to include findings of scientific advice
Year 1	TBD	Within 6 months of anniversary date of certificate	This surveillance will potentially be coordinated with the U.S. Atlantic Spiny Dogfish, Winter and Little skate surveillance if possible.

Table 30 Surveillance level rationale

Year	Surveillance activity	Number of auditors	Rationale
Year 1	On-site	2 on-site auditors with remote support from by the rest of the team	Considering that milestones indicate that most conditions will be closed out in year 4/5, the CAB proposes to have an on-site audit with 2 auditors on-site with remote support – this is to ensure that all information is collected and because the information can be provided remotely.
Year 2	Off-site	Remote support from the entire team	Information could be provided remotely on progress of the conditions.
Year 3	Off-site	Remote support from the entire team	Information can be provided remotely on progress of the conditions.

Year 4	On-site surveillance audit & re-certification site visit	On-site audit with the entire assessment team.	The entire assessment team will need to be present for review of new information and changes in the fishery since the last reassessment.
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12.8 Harmonised fishery assessments

To be drafted at Announcement Comment Draft Report stage

To be completed at Public Certification Report stage

Table 31 Overlapping fisheries

Fishery name	Certification status and date	Performance Indicators to harmonise
U.S Atlantic spiny dogfish and Winter skate	U.S. spiny dogfish certified in 2018, and winter skate certified by scope extension 2019. An additional scope extension to add Little skate is ongoing, with a completed assessment occurring in September 2020.	All performance indicators for P1, P2 and P3 applicable to the Northeast skate complex

Table 32 Overlapping fisheries Rationale

Supporting information	
<ul style="list-style-type: none"> - Describe any background or supporting information relevant to the harmonisation activities, processes and outcomes. 	
<p>The US Atlantic spiny dogfish, Winter skate and Little skate cover the same geographical area and species as the Southern New England Winter and Little skate fishery. The US Atlantic spiny dogfish, Winter skate and Little skate used v1.3 of the MSC Standard, whereas the Southern New England Winter and Little skate fishery used FCP 2.1 and v2.01 of the Standard. Because of the different versions used in the respective assessments, there will be some differences regarding the scoring and conditions issued. In addition, when we carried out the scope extensions for little and winter skate for the US Atlantic spiny dogfish assessment, we did not carry out a detailed review of Principle 2. When we did the P2 assessment for the present assessment, we found some discord with the previous assessment regarding which P2 scoring elements to include in the ETP component particularly. Because of this, we have to harmonize with ourselves between the two reports. Because both fisheries have the same assessment team, this will not require special meetings, and the US Atlantic spiny dogfish, winter and little skate fishery will be harmonized to the present assessment at their next surveillance audit, which will take place most likely around or ahead of the time the current fishery is certified.</p>	
Was either FCP v2.1 Annex PB1.3.3.4 or PB1.3.4.5 applied when harmonising?	Yes, though harmonization between the two fisheries involves the same assessment team for both.
Date of harmonisation meeting	N/A
If applicable, describe the meeting outcome	
<ul style="list-style-type: none"> - e.g. Agreement found among teams or lowest score adopted. 	
Agreement found between teams (same team for both assessments). There will be no scoring differences.	

Table 33 Scoring differences

Performance Indicators (PIs)	Fishery name	Fishery name	Fishery name	Fishery name
PI	N/A	N/A	N/A	N/A
PI	N/A	N/A	N/A	N/A
PI	N/A	N/A	N/A	N/A

12.9 Objection Procedure – delete if not applicable

To be added at Public Certification Report stage

The report shall include all written decisions arising from a 'Notice of Objection', if received and accepted by the Independent Adjudicator.

Reference(s): FCP v2.1 Annex PD

12.10 FOIA Request

UNITED STATES DEPARTMENT OF COMMERCE National Oceanic and Atmospheric Administration National Marine Fisheries Service Office of Law Enforcement Headquarters 1315 East West Highway Silver Spring, MD 20910

September 30, 2020

Erin Wilson

1443 S 259th Street

Des Moines, WA 98198

Re: Request No. DOC-NOAA-2020-001823

Dear Ms. Wilson,

This letter is in response to your Freedom of Information Act (FOIA) request which was received by our office on August 28, 2020, in which you requested:

“...would like enforcement actions related to the Northeast Skate fishery and/or any enforcement action related to the skate fishery by gillnet, longline or bottom trawl in the last 2-3 years (2017-2020) in the New England area. This is to complete a fishery assessment against the Marine Stewardship Council (MSC) Standard for sustainable fisheries. We need to ensure the fishery is in compliance with the management system and that the sanctions in place to deal with non-compliance are consistently applied and demonstrably provide effective deterrence. After clarification- A spreadsheet with no vessel names or specifics will suffice.”

We have located one document responsive to your request. You are granted full access to those records, and a copy is enclosed. Your request is now completed.

Although we do not consider this to be a denial of your request, you have the right to file an administrative appeal if you are not satisfied with our response to your FOIA request. All appeals should include a statement of the reasons why you believe the FOIA response was not satisfactory. An appeal based on documents in this release must be received within 90 calendar days of the date of this response letter at the following address:

Assistant General Counsel for Employment, Litigation, and Information
U.S. Department of Commerce
Office of General Counsel
Room 5896
14th and Constitution Avenue, N.W.
Washington, D.C. 20230

An appeal may also be sent by e-mail to FOIAAppeals@doc.gov, or by FOIAonline at <https://foiaonline.regulations.gov/foia/action/public/home#>.

For your appeal to be complete, it must include the following items:

- a copy of the original request,
- our response to your request,
- a statement explaining why the withheld records should be made available, and why the denial of the records was in error.
- “Freedom of Information Act Appeal” must appear on your appeal letter. It should also be written on your envelope, or e-mail subject line.

FOIA appeals posted to the e-mail box, FOIAOnline, or Office after normal business hours will be deemed received on the next business day. If the 90th calendar day for submitting an appeal falls on a Saturday, Sunday or legal public holiday, an appeal received by 5:00 p.m., Eastern Time, the next business day will be deemed timely.

FOIA grants requesters the right to challenge an agency's final action in federal court. Before doing so, an adjudication of an administrative appeal is ordinarily required.

The Office of Government Information Services (OGIS), an office created within the National Archives and Records Administration, offers free mediation services to FOIA requesters. They may be contacted in any of the following ways:

Office of Government Information Services National Archives and Records Administration Room 2510 8601 Adelphi Road College Park, MD 20740-6001

Email: ogis@nara.gov

Phone: 301-837-1996 Fax: 301-837-0348 Toll-free: 1-877-684-6448

If you have questions regarding this correspondence, please contact Leta Etheridge at Leta.Etheridge@noaa.gov or the NOAA FOIA Public Liaison Ed Kearns at (301) 628-5658.

Sincerely, Leta Etheridge

Acting FOIA Coordinator

Division	Incident Number	Date Reported	Status	Disposition	Title	Cite
Northeast	1800414	01/21/2018	Closed	OLE-WW Affirmed	50 CFR	648.14(9)
Northeast	1801025	02/27/2018	Closed	OLE-WW Affirmed	50 CFR	648.322(e)(1)
Northeast	1804632	06/01/2018	Closed	OLE-WW Affirmed	50 CFR	648.322(c)(4)
Northeast	* 1804684	07/12/2018	Closed	OLE-WW Affirmed		
Northeast	1900228	11/16/2018	Closed	GCES-Settlement Agreement Satisfied	50 CFR	648.14(k)(2); 648.14(e)(1); 229.3(g);

7 Open Cases

* Should not have been included in original submission, not responsive to skate request.

Cite Description	Gear	Fishery
Violate any provision of an in-season action to adjust trip limits, gear usage, season, area access and/or closure, or any other measure authorized by this part.	Dredge	NE - Skate Complex
(e) Prohibitions on possession of skates. A vessel fishing in the EEZ portion of the Skate Management Unit may not:	Non-pelagic Trawl	NE - Skate Complex
(1) Retain, possess, or land barndoor or thorny skates taken in or from the EEZ portion of the Skate Management Unit.		
(4) The vessel owner or operator possesses or lands only whole skates less than 23 inches (58.42 cm) total length, and does not possess or land any skate wings.	Non-pelagic Trawl	NE - Skate Complex

(2) Permit requirements for vessel and operator permit holders. It is unlawful for any owner or operator of a vessel issued a valid Federal NE multispecies permit or letter under 648.4(a)(1)(i), unless otherwise specified in 648.17, to do any of the following: (iii) Fail to comply with the pre-trip notification requirements of the NE multispecies observer program specified in 648.11(k).

It is unlawful for any person to do any of the following:

(1) Assault, resist, oppose, impede, harass, intimidate, or interfere with or bar by command, impediment, threat, or coercion any NMFS-approved observer or sea sampler conducting his or her duties; any authorized officer conducting any search, inspection, investigation, or seizure in connection with enforcement of this part; any official designee of the Regional Administrator conducting his or her duties, including those duties authorized in 648.7(g).

(g) It is prohibited to violate any regulation in this part or any provision of section 118 of the Act.

Gilnet

NE - Multispecies & Skate Complex