

---

**MSC Final Report and Determination**  
*for*  
**U.S. Winter Skate Fishery Scope Extension Assessment**

---



**MRAG Americas, Inc.**

**Amanda Stern-Pirlot, Joseph Powers, and Erin Wilson**

May 9<sup>th</sup>, 2019

**CLIENT DETAILS:**

Sustainable Fisheries Association, Inc.

**MSC reference standards:**

MSC Certification Requirements (CR) Version 1.3 (standard)  
MSC Fishery Certification Requirements (FCR) Version 2.0 (process)

# Table of Contents

1	Executive Summary .....	3
2	Authorship and Peer Reviewers .....	7
2.1	Assessment Team .....	7
2.2	Peer Reviewer.....	8
3	Description of the Fishery .....	8
3.1	Unit(s) of Assessment (UoA) and Scope of Certification Sought .....	8
3.2	Overview of the fishery.....	10
3.3	Principle One: Target Species Background .....	10
3.4	Principle Two: Ecosystem Background .....	16
3.5	Principle Three: Management System Background .....	20
4	Evaluation Procedure .....	29
4.1	Harmonised Fishery Assessment .....	29
4.2	Previous assessments .....	29
4.3	Assessment Methodologies .....	29
4.4	Evaluation Processes and Techniques .....	29
5	Traceability .....	33
5.1	Eligibility Date.....	33
5.2	Traceability within the Fishery .....	33
5.3	Eligibility to Enter Further Chains of Custody.....	34
5.4	Eligibility of Inseparable or Practicably Inseparable (IPI) stock(s) to Enter Further Chains of Custody .....	35
	Evaluation Results .....	36
5.5	Principle Level Scores.....	36
5.6	Summary of PI Level Scores.....	36
5.7	Summary of Conditions.....	36
5.8	Recommendations .....	38
5.9	Determination, Formal Conclusion and Agreement .....	38
5.10	Changes in the fishery prior to and since Pre-Assessment .....	38
	References.....	39
	Appendices .....	41
	Appendix 1 Scoring and Rationales.....	41
	Appendix 1.1 Performance Indicator Scores and Rationale .....	41
	Appendix 1.2 Risk Based Framework (RBF) Outputs .....	66
	Appendix 1.3 Conditions .....	67
	Appendix 2 Peer Review Reports – Peer Reviewer A .....	79
	Appendix 3 Stakeholder submissions .....	94
	Appendix 4 Surveillance Frequency .....	111
	Appendix 5 Objections Process .....	112

# 1 Executive Summary

This Final Report and Determination sets out the results of the Marine Stewardship Council (MSC) assessment of the U.S. Atlantic winter skate (*Leucoraja ocellata*) fishery against the MSC Fishery Standard. This evaluation has been undertaken by way of a “scope extension” to the currently certified U.S. Atlantic spiny dogfish fishery. As such, only those components not held in common with the spiny dogfish fishery have been evaluated, and the commensurate background sections revised. See SCS 2018 for the complete report on the components of the fishery that were not re-evaluated during the scope extension process. This report is incorporated herein by reference.

The scope extension assessment includes both winter skate and monkfish (*Lophius americanus*), however, **this report only presents the results of assessment of the Winter skate Units of Assessment. The monkfish UoAs remain in assessment but are not a subject of this report.**

SCS Global Services was contracted in 2017 by Sustainable Fisheries Association, Inc. to undertake an MSC reassessment of the U.S. Atlantic Spiny Dogfish Fishery, which was subsequently recertified in May 2018.

The following Units of Certification were assessed:

<b>Species:</b>	Atlantic Spiny Dogfish ( <i>Squalus acanthias</i> )
<b>Stock:</b>	Atlantic
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the U.S.A.
<b>Harvest method:</b>	Longline
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch spiny dogfish
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Atlantic Spiny Dogfish ( <i>Squalus acanthias</i> )
<b>Stock:</b>	Atlantic
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the U.S.A.
<b>Harvest method:</b>	Gillnet (Anchor/Drift and sink float gillnets included)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch spiny dogfish
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Atlantic Spiny Dogfish ( <i>Squalus acanthias</i> )
<b>Stock:</b>	Atlantic
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the U.S.A.
<b>Harvest method:</b>	Bottom trawl (all mesh sizes)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for</b>	Vessels with state or federal permits to catch spiny

<b>the chosen stock</b>	dogfish
<b>Other Eligible Fishers:</b>	N/A

The reassessment was undertaken in accordance with the MSC Certification Requirements (v. 1.3, January 10<sup>th</sup>, 2012) and using the MSC Guidance to MSC Certification Requirements (v. 1.0, August 15, 2011) which sets out the assessment and certification process. In 2018, Sustainable Fisheries Association, Inc. requested that SCS transfer the US Atlantic spiny dogfish certificate to MRAG Americas, in order that MRAG Americas could undertake a scope extension for the fishery to include monkfish and winter skate as a target (Principle 1) species. The scope extension assessment has been undertaken in accordance with the process as laid out in the MSC Fisheries Certification Requirements version 2.0 Annex PE but using the default assessment tree contained within Version 1.3 of the MSC Certification Requirements, section C, as that was the tree used in the original dogfish assessment.

As mentioned above, while the monkfish Units of Assessment remain in assessment, this report provides the result for the Winter skate Units of Assessment only.

The scope extension process adds five additional Units of Assessment to the fishery as follows, with the first two (Winter skate) being the subject of the present report. **The monkfish UoAs remain in assessment, but they are treated as Principle 2 stocks in the present report:**

<b>Species:</b>	Winter skate ( <i>Leucoraja ocellata</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the U.S.A.
<b>Harvest method:</b>	Longline
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch Winter skate
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Winter skate ( <i>Leucoraja ocellata</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the U.S.A.
<b>Harvest method:</b>	Gillnet (Anchor/Drift and sink float gillnets included)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch Winter skate
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Winter skate ( <i>Leucoraja ocellata</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the U.S.A.
<b>Harvest method:</b>	Bottom trawl (all mesh sizes)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch Winter skate.

<b>Other Eligible Fishers:</b>	N/A
--------------------------------	-----

The following monkfish UoAs are still in assessment, though not the subject of this report (still assessed as P2 within this report:

<b>Species:</b>	Monkfish ( <i>Lophius americanus</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the U.S.A.
<b>Harvest method:</b>	Bottom trawl (all mesh sizes)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch monkfish
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Monkfish ( <i>Lophius americanus</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the U.S.A.
<b>Harvest method:</b>	Gillnet (Anchor/Drift and sink float gillnets included)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch monkfish
<b>Other Eligible Fishers:</b>	N/A

The following steps have been undertaken as part of the scope extension process:

- A Gap Analysis per FCR 7.22.4 to confirm which assessment components are the same and different to the certified U.S. Atlantic spiny dogfish fishery (<https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish/@assessments/>).
- Announcement of the assessment, including scope extension assessment team, use of the default assessment tree (v1.3), and notification of the site visit.
- Undertaking of the site visit
- Production of the client draft scope extension report that describes the background to the fisheries, the fishery management operations and the evaluation procedure and results. The client and subsequent draft and final reports include only the information required for the scope extension evaluation according to FCR PE 3.1.2. The original SCS Global Services U.S. Atlantic Spiny Dogfish Public Certification Report (SCS 2018) contains the remaining evaluation of those components held in common between the different fisheries.
- Stakeholder consultation on proposed peer reviewers (undertaken by the Peer Review College)
- Peer Review Confirmation
- Production of the Peer Review Draft Report
- 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

- Production of the Final Report and Determination

The assessment of the U.S. Atlantic winter skate fishery was undertaken by Amanda Stern-Pirlot, Joseph Powers, and Erin Wilson. Amanda Stern-Pirlot is the Assessment Team Leader. According to the gap analysis and as confirmed following the site visit and information gathering stage, differences between the U.S. Atlantic winter skate fishery and the certified U.S. Atlantic spiny dogfish fishery were found in Principle 1 – Outcome and Harvest Strategy, Principle 2 – Retained species outcome, and Principle 3 – Fishery Specific Management.

A site visit was conducted in Gloucester and New Bedford, Massachusetts on July 26<sup>th</sup> and 27<sup>th</sup>, 2018 during which interviews with fisheries scientists, managers, and industry members were held.

Overall draft scores are as follows:

	Winter skate gillnet	Winter skate bottom trawl	Winter skate longline
Principle 1	85.0	85.0	85.0
Principle 2	81.7	80.7	83.0
Principle 3	96.0	96.0	96.0

The main strengths and weaknesses pertaining to Principles 1 and 3 are as follows:

Principle 1 The Winter skate stock has an appropriate reference points and harvest strategies which have been utilized. The main weakness is that the stock has limited data and is being assessed within a data-poor framework which has not been revisited for more almost a decade.

Principle 3 The winter skate fishery has strong management objectives and clearly stated goals in the FMP. The main weaknesses are evidence of compliance and that the sanctions in place are effective in enforcing that fishers comply with the management system.

Two new conditions were raised as a result of this scope extension for PIs 1.2.3 (information and monitoring) and 1.2.4 (assessment of stock status). Current conditions raised for Principle 2 ETP species by SCS (2018) during the main dogfish assessment also apply to the winter skate UoAs.

On the basis that the overall scores for P1, 2 and 3 are above 80 and no individual PI scored below 60, peer review and stakeholder comments, MRAG Americas has determined that winter skate should be certified via scope extension to the US Atlantic Spiny Dogfish certificate. **This is a draft determination and not a certification decision.**

## 2 Authorship and Peer Reviewers

### 2.1 Assessment Team

The assessment team consists of Amanda Stern-Pirlot, Dr. Joseph Powers, and Erin Wilson. Ms. Stern-Pirlot will serve as assessment team leader. Qualifications of the team are:

**Ms. Amanda Stern-Pirlot** (Principle 2 and Team Leader) 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 and currently serves as Director of Fisheries Certification. She is currently serving on several assessment teams as team member and team leader. Prior to her work with MRAG Americas, she has worked together with other scientists, conservationists, fisheries managers and producer groups on international fisheries sustainability issues for over 10 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.

**Dr. Joseph E. Powers** (Principle 1) 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.

**Ms. Erin Wilson** (Principle 3) joined MRAG Americas, Inc. as a Fisheries Consultant in February 2015. She is currently serving as a team member for several MSC assessments and conducts routine audits for the International Seafood Sustainability Foundation. 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 (with a marine emphasis) from Colorado State University, along with a Spanish minor.

## 2.2 Peer Reviewer

The review was conducted anonymously by a single peer reviewer that was chosen from the MSC Peer Reviewer Shortlist. This list can be viewed at the following link:

<https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish/@assessments>

## 3 Description of the Fishery

### 3.1 Unit(s) of Assessment (UoA) and Scope of Certification Sought

The MRAG Amercias assessment team has determined that the fishery is within scope as required by the MSC. It is not a fishery based on introduced species, it is not an enhanced fishery, it does not exist as a controversial unilateral exemption to an international agreement, it does not use destructive fishing practices as defined by MSC, and it does not target mammals, birds, or reptiles.

#### 3.1.1 UoA and Proposed Unit of Certification (UoC)

The units of assessment are:

<b>Species:</b>	Winter skate ( <i>Leucoraja ocellata</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the USA.
<b>Harvest method:</b>	Bottom trawl (all mesh sizes)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch Winter skate
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Winter skate ( <i>Leucoraja ocellata</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the USA
<b>Harvest method:</b>	Longline
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch Winter skate
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Winter skate ( <i>Leucoraja ocellata</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the USA
<b>Harvest method:</b>	Gillnet (Anchor/Drift and sink float gillnets included)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for</b>	Vessels with state or federal permits to catch Winter



<b>the chosen stock</b>	skate
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Monkfish ( <i>Lophius americanus</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the USA
<b>Harvest method:</b>	Bottom trawl (all mesh sizes)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch monkfish
<b>Other Eligible Fishers:</b>	N/A

<b>Species:</b>	Monkfish ( <i>Lophius americanus</i> )
<b>Stock:</b>	Atlantic stock
<b>Geographical area:</b>	State and federal waters off the Atlantic coast of the USA
<b>Harvest method:</b>	Gillnet (Anchor/Drift and sink float gillnets included)
<b>Client Group:</b>	Sustainable Fisheries Association, Inc.
<b>Fishers in the UoC for the chosen stock</b>	Vessels with state or federal permits to catch monkfish
<b>Other Eligible Fishers:</b>	N/A

Units of Assessment were used as they are compliant with the Client wishes for assessment coverage and in full conformity with MSC criteria for setting the Unit of Assessment.

**The proposed Units of Certification include only the winter skate Units of Assessment. The monkfish UoAs remain in assessment but are not the subject of this report.**

### 3.1.2 Final UoC(s)

(PCR ONLY)

The PCR shall describe:

- The UoC(s) at the time of certification.
- A rationale for any changes to the proposed UoC(s) in section 3.1(c).
- Description of final other eligible fishers at the time of certification.

**(References: FCR 7.4.8-7.4.10)**

### 3.1.3 Total Allowable Catch (TAC) and Catch Data

**Table 1. Total Allowable Landings (TAL) for Skate Complex and Landings Data-Winter skate**

<b>TAL Skate Complex</b>	<b>Year</b>	<b>2018</b>	<b>Amount</b>	<b>12590 MT</b>
<b>UoA share of Skate Complex TAL</b>	<b>Year</b>	<b>2018</b>	<b>Amount</b>	<b>12590 MT</b>
<b>UoC (Winter skate) share of</b>	<b>Year</b>	<b>2018</b>	<b>Amount</b>	<b>--</b>

<b>total TAL*</b>				
<b>Total green weight catch by UoC (Winter skate)</b>	<b>Year (most recent)</b>	<b>2016</b>	<b>Amount</b>	<b>9404 MT</b>
	<b>Year (second most recent)</b>	<b>2015</b>	<b>Amount</b>	<b>8134 MT</b>

### Scope of Assessment in Relation to Enhanced Fisheries

This is not an enhanced fishery.

### 3.1.5 Scope of Assessment in Relation to Introduced Species Based Fisheries (ISBF)

This is not a fishery based on introduced species.

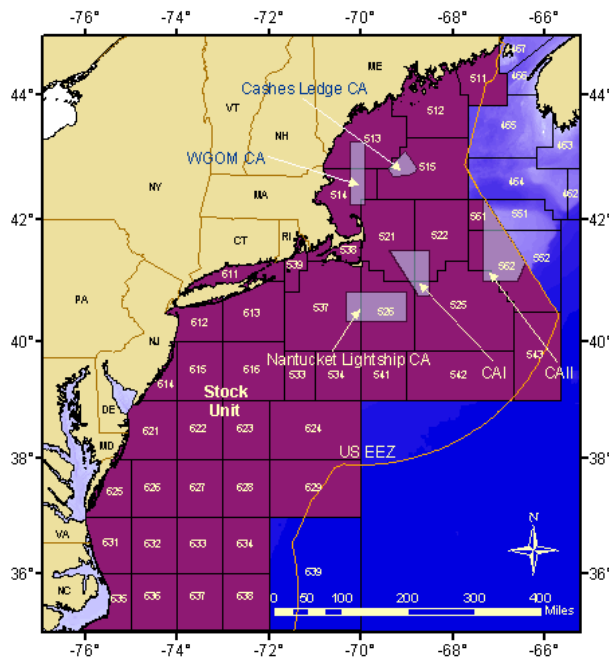
## 3.2 Overview of the fishery

The overview of the fishery given in SCS 2018 is incorporated herein by reference.

## 3.3 Principle One: Target Species Background

### 3.3.1 Description of Fishery Resource

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 3.3-2. Statistical areas used to define Winter Skate stock.**

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

### 3.3.2 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). Fishing mortality reference points were developed for winter and little skate and overfishing was occurring for winter skate.

Subsequently, the Winter Skate stock assessment approach is based on Data Poor Stocks Workshop A number of alternative methods were examined at that workshop. These included SPR-based reference points for three skate species, barndoor, winter, and thorny, were derived from life-history parameters and fitted Beverton-Holt stock recruit relationships:

**Table 1. Estimates of Beverton-Holt parameters, and implied annual survival ( $\text{SeggS0} \dots \text{Sr-1} / r$ ) for the product of total number of eggs per female per year and cumulative survival to recruitment,  $\text{SeggS0} \dots \text{Sr-1}$ . (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 eggs/female)	80	41	48	40
$S_{egg}S_0 \dots S_{r-1}$	0.07	0.03	0.04	0.24
$(S_{egg}S_0 \dots S_{r-1})^{1/r}$	0.27	0.51	0.50	0.83

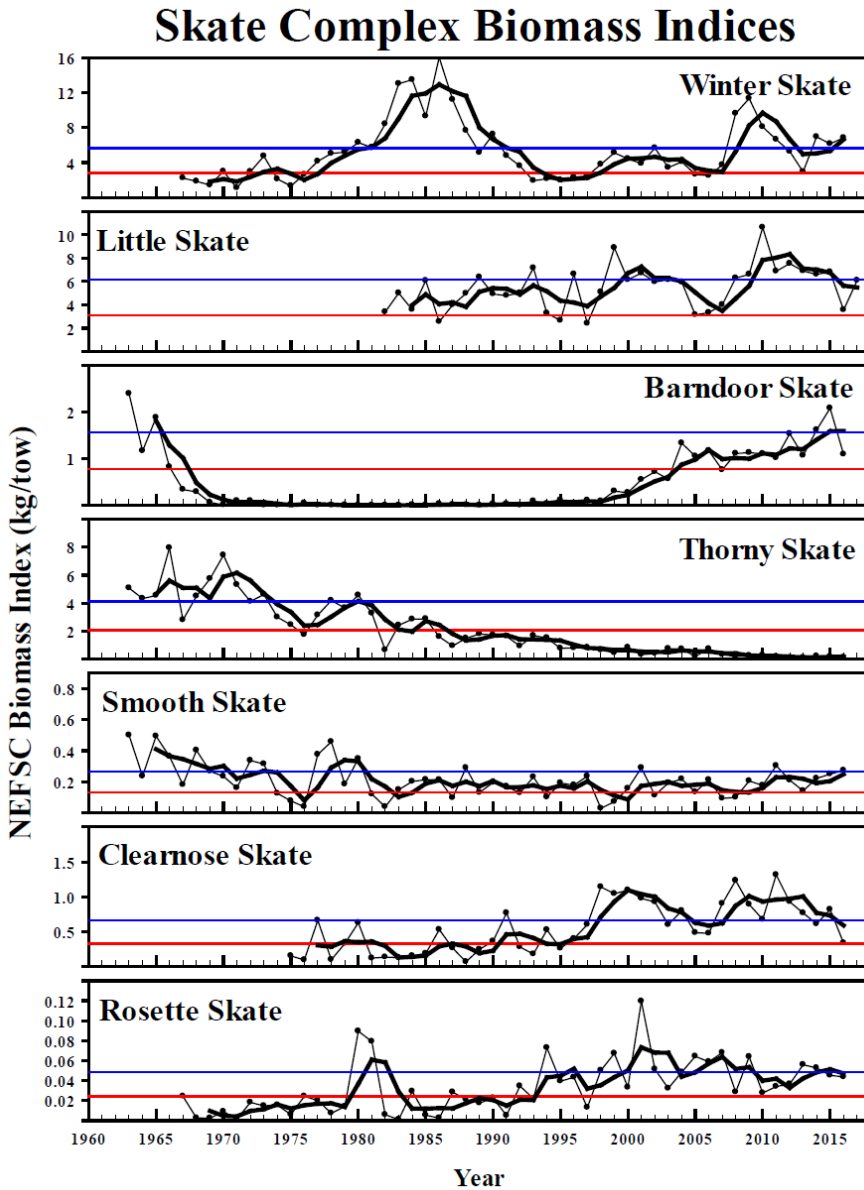
**Table 2. Species specific reference points (and CV) for the assumed natural mortality rate ( $M$ ), the estimated maximum lifetime reproduction ( $\hat{\alpha}$ ), and the implied steepness (steepness is related to  $\hat{\alpha}$  as  $\hat{\alpha}/(\hat{\alpha}+4)$ ). No reference points are given for Clearnose skate as diagnostics and estimates were unsatisfactory (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. For skates, no new measurable alternative biological reference points have been identified or recommended. Thus, the existing overfishing definitions, using information updated through 2007/2008 have remained in place.

The basis for status determination for the skate complex including Winter Skate is the determination of an appropriate index of biomass abundance and then to define threshold and target levels based upon the history of the index, the history of catches and other external information.

The following figure gives the trajectories of the survey biomass indices which are used for status determination (NEFSC 2017).



**Table 3.3-5. 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 developed through 2007/2008**

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 BTHRESHOLD. For each of the skate stocks, estimates of the three-year moving average survey index. Overfished status determinations are made by comparing the survey index estimates to the recommended biomass-based reference points (NEFSC 2017)

	Winter Skate
<b>Overfishing?</b>	No
<b>Overfishing Definition</b>	When the 3-year moving average of the (spring/autumn) survey mean weight per tow declines 20% or more, or when the (spring/autumn) survey mean weight per tow declines for 3 consecutive years.
<b>Overfished?</b>	No
<b>Overfished Definition</b>	When the 3-year moving average of the autumn survey mean weight per tow is less
<b>Rebuilding Program</b>	No
<b><math>F/F_{MSY}</math></b>	Undefined
<b>Fishing Mortality Rate</b>	Undefined
<b>Biomass Threshold</b>	2.83 kg/tow
<b><math>B/B_{MSY}</math> or <math>B/B_{MSY}</math> Proxy</b>	5.66 kg/tow
<b>Biomass (2016)</b>	5.35 kg/tow

### Status Determination Criteria

Overfished definition for both Little and Winter skate is “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.” (NEFMC 2017, NEFSC 2017)

### 3.3.3 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. Similarly, 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 2017)

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. (NEFMC 2017, NEFSC 2017)

Overfished definition for both Little and Winter skate is “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.” (NEFMC 2017, NEFSC 2017)

Landings of skates have been apportioned by species with Winter Skate being the largest share. Additionally, discards have been estimated. The following figures show a general increasing trend from the 1970s to the early 2000s. But there has been a declining trend over the last decade. Discards have fluctuated at a low level over the last 20 years, or so.



**Figure 3.3-8. Winter Skate and All Skates combined landings in mt (left) and discards in numbers (right)**

The skate are managed as a complex with ABC and ACL specifications 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. other managed skate species. 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; state landings would approximate to 7% of the total landings. (NEFMC 2017, NEFSC 2017)

The ACL is adjusted by a 25% buffer to get ACT. Then 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 2018)

Management specifications for 2018 are given in the following table.

	Skate Complex
Overfishing Limit (OFL)	Undefined
Acceptable Biological Catch (ABC)	31,081 mt
Annual Catch Limit (ACL)	31,081 mt
Annual Catch Target (ACT)	23,311 mt
Total Allowable Landings (TAL)	12,590 mt [wing TAL: 8,372 mt (66.5%), bait TAL: 4,218 mt (33.5%)]

### 3.3.4 Lower Trophic Level Species

Winter Skate are not Lower Trophic Level species

## 3.4 Principle Two: Ecosystem Background

As this is a scope extension assessment, most of the ecosystem background information pertaining to these fisheries contained in the spiny dogfish reassessment report (SCS 2018), is relevant here and will not be repeated.

The exception to the above is that the assessment team did look anew at the Retained species component since Winter skate was a “main retained” scoring element in the dogfish assessment and it is now under consideration as a Principle 1 species, the assessment team had to assess the impact of this change to P2 species composition and possibly scores. The team also took the opportunity to review updated catch composition information provided by the Northeast Fisheries Observer Program (NEFOP) to check for any significant changes in the most recent two years of fishing. The present assessment used the same classification system as used in SCS 2018 to define main and minor species within this component.

Table 1 has been excerpted from SCS 2018, with modifications relevant to the Winter skate target tracked (strikethrough for deletions, red underline for additions). The changes are the result of both removing Winter skate as a P2 species and updating the catch composition percentages to reflect the most recent 5 years of fishing from a data acquisition request from the NE Fisheries Observer database (NMFS, 2018).

**Table 3. Retained P2 species in the US Atlantic trawl, gillnet and longline fisheries, updated from SCS 2018.**

Common name	Scientific name	RBF	Less Resilient	Avg. % UoA Catch	MSC Classification
<b>Gill net UoA</b>					
Winter Skate	<i>Leucoraja ocellata</i>	No	Yes	25.5 %	<del>Retained</del> —main



Monkfish	<i>Lophius americanus</i>	No	No	20.0 %	Retained – main
Pollock	<i>Pollachius virens</i>	No	No	6.2%	Retained – main
<u>Skate, Barndoor</u>		<u>No</u>	<u>Yes</u>	<u>3.4%</u>	<u>Retained-main</u>
Atlantic Cod	<i>Gadus morhua</i>	No	No	3.9%	Retained-minor
<u>Skate, Little</u>		<u>No</u>	<u>Yes</u>	<u>1.8%</u>	<u>Retained-minor</u>
White Hake	<i>Urophycis tenuis</i>	No	No	1.4%	Retained-minor
American Lobster	<i>Homarus americanus</i>	No	No	1.9%	Retained-minor
<b>Otter Trawl UoA</b>					
Skate, Little	<i>Leucoraja erinacea</i>	No	Yes	<del>10.7 %</del> <u>7.8%</u>	Retained - main
Scup	<i>Stenotomus chrysops</i>	No	No	<del>6.1%</del> <u>4%</u>	Retained – <del>main</del> <u>minor</u>
Skate (Not Known) <sup>1</sup> Either Little skate or Winter Skate	<i>Rajidae</i>	No	Yes	<del>5.9%</del> <u>3.9%</u>	Retained - main
<del>Winter Skate</del>	<del><i>Leucoraja ocellata</i></del>	<del>No</del>	<del>Yes</del>	<del>4.8%</del>	<del>Retained – main</del>
Silver Hake	<i>Merluccius bilinearis</i>	No	No	<del>5.9%</del> <u>4.9%</u>	Retained - main
Acadian Redfish	<i>Sebastes fasciatus</i>	No	Yes	<del>5.2%</del> <u>4.5%</u>	Retained - main
Atlantic Herring	<del><i>Clupea harengus</i></del>	<del>No</del>	<del>No</del>	<del>2.5%</del> <u>1.0%</u>	<del>Retained-minor</del>
Longfin Squid	<i>Doryteuthis (Amerigo) pealeii</i>	No	No	<del>2.8%</del> <u>13.1 %</u>	<del>Retained-minor</del> <u>main</u>
<u>Shortfin Squid</u>		<u>No</u>	<u>No</u>	<u>7.2%</u>	<u>Retained-main</u>
Monkfish	<i>Lophius americanus</i>	No	No	3.5%	Retained-minor
Butterfish	<i>Peprilus triacanthus</i>	No	No	<del>2.0%</del> <u>4.0%</u>	Retained-minor
Red Hake	<i>Urophycis chuss</i>	No	No	<del>3.5%</del> <u>1.6%</u>	Retained-minor
Summer Flounder	<i>Paralichthys dentatus</i>	No	No	<del>3.3%</del> <u>3.9%</u>	Retained-minor
<del>Winter Flounder</del>	<del><i>Pseudopleuronectes americanus</i></del>	<del>No</del>	<del>No</del>	<del>2.4%</del> <u>0.8%</u>	<del>Retained – minor</del>
<del>Atlantic Cod</del>	<del><i>Gadus morhua</i></del>	<del>No</del>	<del>No</del>	<del>1.9%</del>	<del>Retained-minor</del>
<b>Bottom Longline</b>					
Tilefish	<i>Lopholatilus chamaeleonticeps</i>	No	Yes	<del>33%</del> <u>55%</u>	Retained - main
<u>Skate, Barndoor</u>		<u>No</u>	<u>Yes</u>	<u>7%</u>	<u>Retained-main</u>
<u>Dogfish, Smooth</u>		<u>No</u>	<u>Yes</u>	<u>4%</u>	<u>Retained-main</u>

Dogfish and Winter skate are both now Principle 1 species. Three species are now considered as main retained species whereas in SCS 2018 they were considered minor. These are shortfin squid, barndoor skate, and smooth dogfish. Therefore, PI 2.1.1 requires rescoring on the basis of a different mix of main retained scoring elements. However, the assessment of retained species management and information basis as contained in SCS 2018 applies equally to this scope extension, therefore rescoring of the management and information PIs for retained species is not necessary.

### 3.4.1 Status of the three new main retained species:

#### Shortfin squid

The shaded text below has been excerpted from:

<https://www.nefsc.noaa.gov/sos/spsyn/iv/sfsquid/>

The northern shortfin squid, *Illex illecebrosus*, is a highly migratory, transboundary species that is distributed in the Northwest Atlantic Ocean from the Florida Straits to Newfoundland (Dawe and Hendrickson 1998). The northern component of the stock, extending from Newfoundland to the southern Scotian Shelf, is assessed annually and managed by the Northwest Atlantic Fisheries Organization (NAFO) based on a total allowable catch (TAC). The southern and U.S. stock component, extending from the Gulf of Maine to Florida, has been managed since 1977 by the Mid-Atlantic Fishery Management Council (MAFMC), based on an annual TAC, under the provisions of the Atlantic Mackerel, Squid, and Butterfish Fishery Management Plan (FMP).

*I. illecebrosus* live for less than one year, experiences high natural mortality rates, and exhibit a protracted spawning season whereby overlapping “microcohorts” enter the population throughout the year over a wide geographic area and exhibit variable growth rates. Age estimation, accomplished by counting daily growth increments in the statoliths, has been validated for *I. illecebrosus* (Dawe et al. 1985; Hurley et al. 1985). Back-calculated hatch dates from statolith-based aging studies indicate that spawning occurs throughout most of the year (Dawe and Beck 1997; Hendrickson 2004). The only confirmed spawning area is located in the Mid-Atlantic Bight where the winter cohort spawns during late May (Hendrickson 2004). Spawning may also occur offshore in the Gulf Stream/Slope Water frontal zone, where *Illex* sp. paralarvae have been collected (O’Dor and Balch 1985; Rowell et al. 1985), and south of Cape Hatteras, during winter, where *Illex* sp. hatchlings have been collected (Dawe and Beck 1985). The lifespan of the winter cohort in U.S. waters ranges from 115 to 215 days (Hendrickson 2004). The species is semelparous and fishing mortality and spawning mortality occur simultaneously on the U.S. shelf (Hendrickson and Hart 2006). The species inhabits offshore shelf and slope waters primarily during spring through autumn (Hendrickson and Holmes 2004). Species distribution and abundance are strongly influenced by oceanographic factors (Dawe and Warren 1993; Dawe et al. In Press). Annual survey indices of relative abundance and biomass and average body size suggest that the stock has experienced low and high productivity periods (Hendrickson and Showell 2006; NEFSC 2006). The most recent peer-reviewed assessment of the U.S. component of the *I. illecebrosus* stock took place in November 2005 at SAW 42 (NEFSC 2006).

Amendment 8 (MAFMC 1998) of the FMP specifies  $B_{MSY}$  as 39,300 MT,  $MSY$  as 24,000 MT, and  $F_{MSY}$  as 1.22 per year. However, it was acknowledged that these reference points should be treated with caution given the semelparous life history of this species.

The highly variable recruitment and resulting stock size of short fin squid from year to year explains its fluctuating proportion of the catch in the fishery under assessment (i.e. why it was not a main species two years ago but is now a main species). The survey index of abundance for shortfin squid has fluctuated widely and fishery catches have fluctuated commensurate with periods of relatively higher or lower recruitment. There is no evidence of recruitment impairment throughout the history of monitoring and exploiting this stock in US waters.

## **Barndoor skate**

The shaded information below is summarized from Cavanagh and Damon-Randall, 2009.

Barndoor skates (*Dipturus laevis*) are the largest member of the Rajidae family residing in the Northwest Atlantic. Like many other elasmobranchs, they are long-lived, slow growing, and have a late age at maturity. This life history strategy may make a species particularly vulnerable to overfishing, and such species will often exhibit a slow rate of recovery once fishing pressure or other threats are reduced or removed. Several studies have suggested that barndoor skates are vulnerable to exploitation (e.g., Casey and Myers, 1998; Frisk et al., 2002). However, these studies suffered from a lack of detailed knowledge on the population dynamics and life history of the species and used indirect or coarse biological proxies for model input parameters that may have underestimated the rebuilding potential of the species. Recent research on the life history characteristics (Gedamke et al., 2005; Parent et al., 2008) and population dynamics (Gedamke et al., 2009) of barndoor skates has yielded a more rapid rebuilding estimate and suggests the species may be more resilient to exploitation than previously believed.

The most recent research on life history characteristics and population dynamics of barndoor skates has found a more rapid rebuilding estimate and suggests the species may be more resilient to exploitation than previously believed. In addition, the consistent rise in biomass as well as the large increase in size ranges, coupled with management in other fisheries and the Skate FMP, shows the continued rebuilding of barndoor skate stocks. Given the newly acquired information presented above, barndoor skates no longer meet the criteria for a species of concern and inclusion on the SOC list is no longer warranted.

The NEFMC Skate Plan Development Team (PDT), using input from the workshop, designated overfishing definitions, or biological reference points (BRPs), for each member of the skate complex. Since landings and discard information do not accurately distinguish between skate species, BRPs were based solely off of NEFSC survey data. The sporadic encounter of barndoor skates throughout the survey time series required a unique method of determining BRPs. Their BRP (Btarget) is the mean value of NEFSC autumn biomass index from 1963 to 1966 (1.62 kg per tow) and Bthresholds one-half that value (0.81 kg per tow). The PDT concluded that if the barndoor skate three year moving average of the autumn survey mean weight per tow is less than 0.81 kg per tow, then barndoor skates are considered overfished. If the survey biomass declines for three consecutive years, or declines by more than 30% in one year, the PDT considers F to be greater than the maximum sustainable yield (Fmsy) and barndoor skates, as well as the six other members of the Northeast skate complex, are experiencing overfishing.

In 2006, the Northeast skate complex was re-assessed at the 44th SAW (SAW 44). After analyzing the three-year biomass indices averages for each skate species SAW 44 concluded that overfishing was not occurring for barndoor skates (NEFSC, 2006). Bthreshold (0.81 kg per tow) was reached with the 2002 to 2004 three-year indices average of 0.88 kg per tow, which indicated that the stock was no longer overfished. Since then, the 2003 to 2005 index average rose to 0.96 kg per tow and then rose another 21% to 1.17 kg per tow for 2004 to 2006. The 2007 autumn biomass index declined to 0.80 kg per tow and lowered the three-year average to 1.00 kg per tow. However, this is above Bthreshold for barndoor skates and only declined from the previous average by 14% (less than the 30% critical percent needed for an overfishing designation). Thus, barndoor skates are not currently overfished and overfishing is not occurring.

## **Smooth dogfish**

The Smooth Dogfish (*Mustelus canis*) is managed in state waters under the by Atlantic States Marine Fishery Commission's Interstate Fishery Management Plan for Atlantic Coastal Sharks (ASMFC, 2013). Federal management for Smooth Dogfish falls under the Consolidated Atlantic Highly Migratory Species Fishery Management Plan per Amendment 3 (NMFS 2010), together with all other shark species except for spiny dogfish.

NMFS recently assessed the status of three shark species, including Atlantic smooth dogfish, for the first time using the Southeast Data, Assessment, and Review (SEDAR) process. The final stock assessment (SEDAR 39) was finalized and peer reviewed in March 2015. This assessment concluded that the Atlantic smooth dogfish stock is not considered overfished nor is overfishing occurring (FR Doc. [2015-15809](#) Filed 6-26-15; 8:45 am).

## **3.5 Principle Three: Management System Background**

As this is a scope extension assessment, most of the management information pertaining to these fisheries contained in the spiny dogfish reassessment report (SCS 2018), is relevant here and will not be repeated. The exceptions are fishery specific objectives, management measures specifically for the winter skate and how this species is enforced and monitored.

### **3.5.1 Area of Operation**

Winter skate and are distributed along the coast of the northeast United States from near the tide line to depths exceeding 700 m (Figure 1; NEFMC 2003). The center of distribution for the winter skates is Georges Bank and Southern New England. According to MSC FCR SA4.1.1, the jurisdictional category is single jurisdiction, and is managed solely by the New England Fishery Management Council (NEFMC). It is primarily managed under the Northeast Skate Complex Fishery Management Plan. The 'skate complex' includes seven species: winter, smooth, thorny, barndoor, clearnose, little and rosette skates (NEFMC 2003).



**Figure 1. Geographic range for Atlantic winter skate**

### **3.5.2 Particulars of the recognized groups with interests in the UoA**

Skates are harvested in two different fisheries, one for lobster bait and one for wings for food. 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. 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 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.

### **3.5.3 Consultations leading to the formulation of the management plan**

The Northeast Skate complex was assessed in November 1999 at the 30<sup>th</sup> 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 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).

### **3.5.4 Arrangements of on-going consultations with interest groups**

The websites for the Greater Atlantic Regional Fisheries Office (GARFO) and the New England Fisheries Management Council (NEFMC) have explicit instructions for stakeholder involvement. Detailed instructions are available on how to stay informed, how to get involved in Federal Fisheries Management as well as publicly available meeting documents, agendas, schedules, newsletters, guidelines for making public comments and a calendar for upcoming meetings for the various Committees and Advisory Panels ([www.nefmc.org](http://www.nefmc.org); [www.greateratlantic.fisheries.noaa.gov](http://www.greateratlantic.fisheries.noaa.gov)).

On June 12 – 13<sup>th</sup>, 2017, the Skate Advisory Panel and Skate Committee met in Mansfield, MA to review analyses for Framework 4, adjust the bait skate possession limits and to select preferred alternatives. The Council also recently reviewed Framework Adjustment 6 to the Northeast Skate Complex FMP, which is being developed to prolong the length of the skate wing fishery within allowable catch limits. The Council approved one action for the framework, which reduces the ‘uncertainty buffer’ from 25% to 10% since the fishery has not recently exceeded landing targets (NEFMC 2018). There are currently no upcoming meetings for winter skate.

### **3.5.5 Details of non-MSU users that could affect the UoAs**

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).

### **3.5.6 Details of the Decision-Making Process**

Legislative authority and requirements for these two species are provided by the Magnuson-Stevens Fishery Conservation and Management Act, the National Environmental Policy Act (NEPA) the Administrative Procedures Act (APA), and other US Executive Orders (SCS 2018). The US Atlantic winter skate is primarily managed by its fishery management plan. Decisions for management are driven by two main processes:

1. Annual decision-making processes that result in measures to meet the short-term fishery objectives are driven by the control rules in their FMP
2. Longer-term decision-making processes, such as amendments or framework actions that result in new measures and/or strategies to achieve the long-term fishery objectives

Decisions related to these plans are largely the product of ongoing collaboration and meetings between oversight committees and their advisory panels. The Northeast Skate Complex Committee currently has 9 members and the Northeast Skate Complex Advisory Panel has 15 active members. Representation for the Skate Committee is comprised of members from the fishing industry (both commercial and recreational), scientists, environmental advocates and others with knowledge and experience related to fisheries issues (NEFMC 2018b). Deciding who is elected to the Northeast Skate Complex Committee is an internal administrative function of each Council, whereas the Advisory Panel members submit applications. See SCS 2018 for a detailed review of the National Level of Management, the Councils' process, and the different roles and responsibilities.

#### Winter Skate: Northeast Skate Complex FMP

The NEFMC developed the Skate FMP in 2003. A summary of the plan amendments, frameworks and specifications to this FMP are listed below (NEFMC 2018b):

#### Plan Amendments:

*Amendment 5* (January 4, 2017) Under development

*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 5* (February 13, 2018) – Under development

*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.

### **3.5.7 Objectives for the Fishery**

The fishery specific objectives for outlined in the Northeast Skate Complex FMP and summarized below. For the general Federal Management objectives, please see SCS 2018, or find them on the Council's website: [www.nefmc.org](http://www.nefmc.org).

The overall goal of the Skate FMP is consistent with the requirements of the MSFCMA and other applicable laws to research and manage the Northeast skate complex at long-term sustainable levels. The NEFMC 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.

### **3.5.8 Fisheries Regulations to Meet Objectives**

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 2). Quota changes usually occur every 1 -2 years (GARFO 2018a). 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 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 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 2018a).

#### Days at Sea (DAS) Requirements

In the skate wing fishery, a vessel must be fishing on a Northeast (NE) multispecies A, monkfish, or scallop DAS to possess more than the incidental possession limit of 500 lb. wings (1,135 lb. whole).

#### Exempted Fisheries

Exempted fisheries permit fishing vessels to fish for specific species without being subject to certain Northeast (NE) multispecies regulations, e.g. days-at-sea (DAS), provided the bycatch of the regulated species is minimal (GARFO 2018a). In order to be approved and implemented, exemption programs must have demonstrated that incidental catch of NE multispecies is less than 5 percent of the total catch, by weight, and that the exemption will not threaten fishing mortality objectives (GARFO 2018a)

The following text was taken from the Greater Atlantic Regional Fisheries Office website for the Northeast Skate Fishery Exemptions (GARFO 2018a):

*A vessel fishing in a NE multispecies DAS exemption program that permits skate retention may possess and land skate or skate parts equal to 10%, by weight, of all other species on board, or 500 lb. of skate wings (1,135 lb. whole weight), whichever is less. This program applies in to the skate fishery in the following exemption areas:*

- *Southern New England (SNE) Monkfish and Skate Trawl Exemption Area,*
- *SNE Monkfish, Skate, and Dogfish Gillnet Exemption Area, and*
- *Mid-Atlantic Exemption Area.*

More information on these exemptions can be found at [DAS exemptions](#).

**Table 4. 2017 Seasonal Quota Allocations**

Fishery	Season	TAL (mt)
Wing	1 (May 1-Aug 31)	4,772
	2 (Sept 1-Apr 30)	3,600
Bait	1 (May 1-Jul 31)	1,299
	2 (Aug 1-Oct 31)	1,565
	3 (Nov 1-Apr 30)	1,354

### **3.5.9 Access Rights**

Trawl, gillnet, longline, dredge, handline, and rod and reel are authorized gear types for the skate fishery. Otter trawl is the primary gear used, with gillnets begin the secondary (GARFO 2018a). Most of the skates caught with gillnet are landed as wings, whereas otter trawls are

used for both the wing and bait markets. Landings caught with hook gear, scallop dredge and traps are relatively insignificant (GARFO 2018a). There is overlap with regulated monkfish and multispecies fisheries. A Federal Commercial Permit is required for any vessel that fishes for, catches, possesses, transports, lands, sells or trades skates. There is no minimum fish size, no maximum size for the wing fishery, however the maximum fish size for the bait fishery is 23 inches. There are no specific gear requirements for the skate fishery, however all vessels fishing for skates must follow Northeast multispecies, monkfish or scallop regulations when fishing under DAS for one of those fisheries (GARFO 2018a). Table 4 summarizes the possession limits for the skate fishery. There are no recreational possession restrictions for skate caught in Federal waters.

**Table 5. Skate Specifications May 1, 2016 – April 30, 2018** [GARFO 2018a](#)

<b>Stock</b>	Skate Complex
<b>Overfishing Limit (OFL)</b>	Undefined
<b>Acceptable Biological Catch (ABC)</b>	31,081 MT
<b>Annual Catch Limit (ACL)</b>	31,081 MT
<b>Annual Catch Target (ACT)</b>	23,311 MT
<b>Total Allowable Landings (TAL)</b>	12,590 MT [wing TAL: 8,372 MT (66.5%), bait TAL: 4,218 MT (33.5%)]

**Table 6. Possession Limits US Atlantic Skate fishery** [GARFO 2018a](#)

		<b>Trip Limit (lb.)</b>	
		<b>Skate Wings</b>	<b>Whole Skates</b>
<b>Northeast (NE) Multispecies A, Scallop, or Monkfish DAS</b>	<b>May 1 – August 31</b>	2,600	5,902
	<b>September 1 – April 30</b>	4,100	9,307
<b>NE Multispecies B DAS</b>	<b>May 1 – April 30</b>	220	500
<b>Non-DAS</b>	<b>May 1 – April 30</b>	500	1,135
<b>Skate Bait LOA*</b>	<b>May 1 – October 31</b>	0	25,000
	<b>November 1 – April 30</b>	0	12,000

Note: Conversion factor from wing to whole weight is 2.27.

### 3.5.10 Monitoring, Reporting and Enforcement

#### Reporting Requirements for Winter 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 2018a).

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 2018b; GARFO 2018a). 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 2018a). 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 2018a). All federally permitted vessels are obligated to carry an observer if randomly selected by the National Observer Program (GARFO 2018).

### Enforcement

The NEFMC 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 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. For more information

on the Councils' policies and procedures, please see the SCS 2018 Public Certification Report for US Atlantic Dogfish or at the following link:

<https://www.fisheries.noaa.gov/topic/enforcement>.

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).

### **3.5.11 Planned Education and Training for Interest Groups**

No education and training for interest groups is planned.

### **3.5.12 Research Plan**

The Magnuson-Stevens Reauthorization Act of 2006 requires each regional fishery management council to develop a five-year research priority plan (MSFCMA 1996, SCS 2018). See SCS 2018 for a detailed review of the MAFMC.

The NEFMC has a research plan for the Northeast Skate Complex. Research Priorities Northeast Skate Complex are as follows:

1. Discard mortality studies (e.g., tagging studies) on commercial vessels in various fisheries - determine rates by gear type, area, season, depth, and bottom type for all seven species with an emphasis on overfished species (thorny, winter, barndoor, and little skates)
2. Gear research on trawls, gillnets, and dredges to improve skate selectivity and skate discard survival, including designs that would reduce incidental catches of skates in non-directed fisheries (primarily trawl and gillnet), while maximizing the catch of target (non-skate) species
3. Development of effective species identification methods for fishermen, dealers, and port samplers. This could include an inexpensive biochemical/genetic assay method, better training, and better morphological keys for juvenile skates
4. Directed skate research trips to survey and study:
  - species distribution (particularly in waters deeper than sampled by the NMFS survey)
  - catch (species) composition
  - collect biological samples and fill in remaining gaps in age, growth, maturity, and fecundity of managed skates
  - predator/prey interactions and trophic interactions between skate species in the complex and between skates and other bottom species that occupy the same habitats
  - electronic tagging and telemetry to address short- and long-term movements migrations, stock structure, habitat use, and growth rates
5. Investigate the influence of physical factors (including environmental changes) on shifts in range and distribution of species within the skate complex

### **3.5.13 Review of the Research Plan**

The Councils' process for internal and external review for the winter skate FMPs are conducted on an annual basis at the federal management system. Stock assessments are also subject to internal and external reviews. The management system is regularly reviewed and amended if necessary, through the NEFMC council process. Please see SCS 2018 for a complete review of this process.

## **4 Evaluation Procedure**

### **4.1 Harmonised Fishery Assessment**

Harmonization as relevant for this fishery is fully reported on in SCS 2018. There is no new harmonization needed as a result of adding winter skate a new target stock to this assessment.

### **4.2 Previous assessments**

This fishery is certified with spiny dogfish as a target species, with the first recertification assessment concluding in 2018 (SCS 2018). There were several P2 conditions identified in that assessment, which carry forward into this one and are given in the conditions' tables below. There are therefore no "previous assessment conditions" to report on in this section.

### **4.3 Assessment Methodologies**

To carry out the scope extension process, MSC FCR version 2.0 Annex PE was used. Indicators that are newly scored are from the default assessment tree contained within MSC CR version 1.3 without alterations. This version of the CR was used for scoring per scope extension requirements, because the original spiny dogfish assessment used this version.

### **4.4 Evaluation Processes and Techniques**

#### **4.4.1 Site Visits**

Information supplied by the clients and management agencies was reviewed by the assessment team ahead of the meetings, and discussions with the clients and management agencies centred 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.

Thirty days prior to the audit, all stakeholders from the full reassessment for spiny dogfish were informed of the opportunity to provide information to the auditors in advance of, or during, the period of this scope extension assessment. We received no requests from outside stakeholders to take part in meetings or provide information remotely.

The site visit was held in Gloucester and New Bedford, Massachusetts from August 9-11, with two conference calls held with New England Fisheries Management Council (NEFMC) staff and Northeast Fisheries Science Center staff over this period as well (see below for details).

Table 7 lists the attendees and their affiliations, and Table 8 gives the schedule of meetings and who attended each.

Table 7. US Atlantic monkfish and Winter skate scope extension site visit participants and affiliations

<b>Name</b>	<b>Affiliation</b>
Amanda Stern-Pirlot	MRAG Americas, Assessment team
Joe Powers	Assessment team
Erin Wilson	MRAG Americas, Assessment team
John Whiteside	Sustainable Fisheries Association (client)
John Sullivan	National Marine Fisheries Service (NMFS), Greater Atlantic Region (GARFO)
Tim Donovan	NOAA Office of Law Enforcement
Allison Morphy	NOAA GARFO Sustainable Fisheries
Deb Lambert	NOAA HQ Sustainable Fisheries
Mike Ruccio	NOAA GARFO Sustainable Fisheries
Michael Lanning	NOAA GARFO APSD
Tom Neis	NEFMC
Fiona Hogan	NEFMC
Greg Decelles	Massachusetts Department of Marine Fisheries (DMF)
Cate O'Keefe	Massachusetts DMF
Kathy Soesby	Northeast Fisheries Science Center (NESFC)-Dogfish and skate complex stock assessment author
Russ Brown	NEFMC Population dynamics branch lead
Glen Chamberlin	NEFMC Observer Program
Amanda McCarty	NEFMC Observer Program

Table 8. Consultation Meetings during the Scope extension for US Atlantic Monkfish and Winter Skate

<b>Name Organization</b>	<b>Present at Meeting</b>	<b>Location</b>	<b>Meeting Type</b>	<b>Date/Time</b>
<b>NOAA/NMFS Greater Atlantic Region</b>	Amanda Stern-Pirlot, Joe Powers, Erin Wilson, John Sullivan, Tim Donovan, Allison Morphy, Deb Lambert (phone), Mike Ruccio, Michael Lanning	NOAA/NMFS Greater Atlantic Region 55 Great Republic Dr, Gloucester, MA 01930	In person	26 July 2018 10am-1pm
<b>New England Fisheries Management Council</b>	Amanda Stern-Pirlot, Joe Powers, Erin Wilson, Tom Nies, Fiona Hogan	MRAG Americas, Inc. Northeast office 130 Centre Street, SH101B Danvers, MA 01923	Teleconference	26 July 2018, 2:30-3:30pm
<b>Client Opening Meeting: Sustainable Fisheries Association</b>	Amanda Stern-Pirlot, Joe Powers, Erin Wilson, John Whiteside	Offices of John Whiteside 678 State Rd, North Dartmouth, MA 02747	In person	27 July 2018, 8am
<b>Massachusetts Department of Marine Fisheries</b>	Amanda Stern-Pirlot, Joe Powers, Erin Wilson, John Whiteside, Cate	Mass DMF 836 S Rodney French Blvd, New Bedford, MA 02744	In person	27 July 2018, 9:30am

	O'Keefe, Greg Decelles			
<b>NOAA/NMFS</b> Northeast Fisheries Science Center	Amanda Stern- Pirlot, Joe Powers, Erin Wilson, John Whiteside, Kathy Soesby, Russ Brown, Glen Chamberlin, Amanda McCarty	Offices of John Whiteside 678 State Rd, North Dartmouth, MA 02747	Teleconference	27 July 2018, 1pm
<b>Client Closing Meeting: Sustainable Fisheries Association</b>	Amanda Stern- Pirlot, Joe Powers, Erin Wilson, John Whiteside	Offices of John Whiteside 678 State Rd, North Dartmouth, MA 02747	In person	27 July 2018, 2pm

#### 4.4.2 Consultations

See Table 8 above, with respect to details of the individuals interviewed during the site visit, and summary of topics discussed.

#### 4.4.3 Evaluation Techniques

MRAG published an announcement of the scope extension on our website and sent a direct email to all stakeholders on our stakeholder list. MSC posted the announcement on its US Atlantic Spiny Dogfish 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 Requirements v2.0. Together, these media presented the announcement to a wide audience representing industry, agencies, and other stakeholders.

The assessment team and the clients set up meetings with US Atlantic monkfish and skate fishery management and science personnel, and industry and harvest-sector representatives relevant to the fishery assessment.

In the CR v1.3 default assessment tree used for this assessment, the MSC has 31 'performance indicators', six in Principle 1, 15 in Principle 2, and seven in Principle 3. The performance indicators are grouped in each principle by 'component.' Principle 1 has two components, Principle 2 has five, and Principle 3 has two. Each performance indicator 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 performance indicator is scored first at the SG60 levels. If not all of the SG 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; performance indicator scoring occurs at 5-point intervals. If the fishery meets half the scoring issues at the 80 level, the performance indicator 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.

For this scope extension assessment, only those Performance Indicators found to be not in common with those scored during the full assessment of US Atlantic Spiny Dogfish were included. The preliminary gap analysis for this determination is published here:

[https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish/@@assessment-documentsets?documentset\\_name=Gap+Analysis&phase\\_name=Expedited+audit+announcement&start\\_date=2018-06-25&title=Scope+Extension](https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish/@@assessment-documentsets?documentset_name=Gap+Analysis&phase_name=Expedited+audit+announcement&start_date=2018-06-25&title=Scope+Extension)

The original spiny dogfish reassessment report (SCS 2018) can be found here:

[https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish/@@assessment-documentsets?documentset\\_name=Public+certification+report&phase\\_name=Public+certification+report+and+certificate+issue&start\\_date=2017-04-01&title=Re-Assessment](https://fisheries.msc.org/en/fisheries/us-atlantic-spiny-dogfish/@@assessment-documentsets?documentset_name=Public+certification+report&phase_name=Public+certification+report+and+certificate+issue&start_date=2017-04-01&title=Re-Assessment)

Scoring for this fishery followed a consensus process in which the assessment team discussed the information available for evaluating performance indicators to develop a broad opinion of performance of the fishery against each performance indicator. Review of sections 3.2-3.5 by all team members assured that the assessment team was aware of the issues for each performance indicator. Subsequently, the assessment team member 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.

Performance Indicator scores were entered into MSC's Fishery Assessment Scoring Worksheet (see Table 11, below) to arrive at Principle-level scores.

Table 9. Scoring elements (**note only new scoring elements applicable to the scope extension are listed here**. For a full list of scoring elements please see SCS 2018)

Component	Scoring elements	Main/Not main	Data-deficient or not
Principle 1	US Atlantic Winter skate	Target	Not
Retained Species	Shortfin squid	Main	Not
Retained Species	Barndoor skate	Main	Not
Retained Species	Smooth dogfish	Main	Not

The RBF was not used in this scope extension assessment.



## 5 Traceability

### 5.1 Eligibility Date

The target eligibility date for Winter skate is the date of publication of the Public Comment Draft Report. This date was selected because it is the earliest possible eligibility date according to MSC requirements and there is no concern regarding the implementation of traceability and segregation systems (they are already established).

### 5.2 Traceability within the Fishery

**Table 4 Traceability Factors within the Fishery:**

<b>Traceability Factor</b>	<b>Description of risk factor if present. Where applicable, a description of relevant mitigation measures or traceability systems (this can include the role of existing regulatory or fishery management controls)</b>
Potential for non-certified gear/s to be used within the fishery	This risk is considered low, the main gear types evaluated in this fishery (gillnet, trawl and bottom longline) account for >95% of commercial landings. <b>Existing regulatory or fishery management controls:</b> All federally permitted vessels are required to complete their VTR which includes information on gear type used. The dealer reports usually also includes information on gear type, which would allow the client group to identify if the product is not from the UoC.
Potential for vessels from the UoC to fish outside the UoC or in different geographical areas (on the same trips or different trips)	The risk is considered not applicable because the UoC encompasses the entire range of the fishery including both US state and federal waters. The only potential for vessels from the UoC to fish outside the UoC 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.
Potential for vessels outside of the UoC or client group fishing the same stock	The risk is low, the only vessels outside the UoA that are allowed to fish on the same stock are permitted vessels using handline and recreational fishers. The existing regulatory or fishery management controls to prevent mixing from the non-certified gear type are described previously. Federally permitted vessels are required to Fishing Vessel Trip Report (VTR), which includes information on the NMFS Vessel Permit Number. A vessel that does not hold a permit to fish for dogfish cannot sell their product to a federally permitted

	<p>dealer</p> <p>A partial copy of the VTR with the VTR serial number, Vessel name and registration and NMFS Vessel Permit Number following information is passed on to the federal dealer to whom the vessels sells their catch.</p>
Risks of mixing between certified and non-certified catch during storage, transport, or handling activities (including transport at sea and on land, points of landing, and sales at auction)	<p>There is a negligible risk that product caught by handline gear is mixed with certified product.</p> <p>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 UoC</p>
Risks of mixing between certified and non-certified catch during processing activities (at-sea and/or before subsequent Chain of Custody)	<p>There is no processing at sea, there is no risk of mixing</p>
Risks of mixing between certified and non-certified catch during transshipment	<p>In the past, occasionally SD would be trans-shipped at-sea if the vessel was above its landing quota; however, if this would occur it would be between vessels within the UoC</p>
Any other risks of substitution between fish from the UoC (certified catch) and fish from outside this unit (non-certified catch) before subsequent Chain of Custody is required	<p>The risk of substitution between fish from the UoC and fish from outside this unit before Chain of Custody is minimal because the UoC comprises the entire commercial landings of Winter skate.</p> <p>There is a negligible risk that product caught by handline gear is mixed with certified product.</p> <p>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 UoC</p>

### 5.3 Eligibility to Enter Further Chains of Custody

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, or an independent federally permitted dealer, to one of the processing plants that is part of the client group.

Processing plants that are part of the client group also hold federal dealer permits, 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, 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). Secondary processing 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 all commercial gears across both state and federal waters. 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 UoC. 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.

Parties/categories of parties whose product will be eligible to use the fishery certificate and sell product as MSC certified with the blue eco-label include companies listed under the Sustainable Fisheries Association, Inc.:

- Cape Ann Seafood Exchange, Inc.
- Marder Trawling, Inc.
- Seatrade International

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

- Longline
- Gill net (Anchor/Drift and Sink/Float Gillnets included)
- Bottom trawl (All mesh sizes)

The client group members are required to demonstrate provenance back to the UoC 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.

#### **5.4 Eligibility of Inseparable or Practicably Inseparable (IPI) stock(s) to Enter Further Chains of Custody**

No IPI stocks were identified.

# Evaluation Results

## 5.5 Principle Level Scores

**Table 10. Final (draft) Principle Scores**

	Winter skate gillnet	Winter skate bottom trawl	Winter skate longline
Principle 1	85.0	85.0	85.0
Principle 2	81.7	80.7	83.0
Principle 3	96.0	96.0	96.0

## 5.6 Summary of PI Level Scores

**Table 11. Summary of Performance Indicator Scores for the Winter Skate UoAs.**

Prin- ciple	Wt (L1)	Component	Wt (L2)	PI No.	Performance Indicator (PI)	Wt (L3)	Weight in Principle		Score			
						Either		Or		trawl	gillnet	longline
One	1	Outcome	0.5	1.1.1	Stock status	0.5	0.25	0.333	0.1667	100	100	100
				1.1.2	Reference points	0.5	0.25	0.333	0.1667	80	80	80
				1.1.3	Stock rebuilding			0.333	0.1667			
		Management	0.5	1.2.1	Harvest strategy	0.25	0.125			90	90	90
				1.2.2	Harvest control rules & tools	0.25	0.125			80	80	80
				1.2.3	Information & monitoring	0.25	0.125			75	75	75
				1.2.4	Assessment of stock status	0.25	0.125			75	75	75
Two	1	Retained species	0.2	2.1.1	Outcome	0.333	0.0667			80	80	80
				2.1.2	Management	0.333	0.0667			90	90	90
				2.1.3	Information	0.333	0.0667			80	80	80
		Bycatch species	0.2	2.2.1	Outcome	0.333	0.0667			80	80	80
				2.2.2	Management	0.333	0.0667			90	90	90
				2.2.3	Information	0.333	0.0667			80	80	80
		ETP species	0.2	2.3.1	Outcome	0.333	0.0667			75	75	95
				2.3.2	Management	0.333	0.0667			85	75	85
				2.3.3	Information	0.333	0.0667			80	75	80
		Habitats	0.2	2.4.1	Outcome	0.333	0.0667			80	80	80
				2.4.2	Management	0.333	0.0667			80	80	80
				2.4.3	Information	0.333	0.0667			80	80	80
		Ecosystem	0.2	2.5.1	Outcome	0.333	0.0667			80	80	80
				2.5.2	Management	0.333	0.0667			80	80	80
				2.5.3	Information	0.333	0.0667			85	85	85
Three	1	Governance and policy	0.5	3.1.1	Legal & customary framework	0.25	0.125			100	100	100
				3.1.2	Consultation, roles & responsibilities	0.25	0.125			100	100	100
				3.1.3	Long term objectives	0.25	0.125			100	100	100
				3.1.4	Incentives for sustainable fishing	0.25	0.125			100	100	100
		Fishery specific management system	0.5	3.2.1	Fishery specific objectives	0.2	0.1			100	100	100
				3.2.2	Decision making processes	0.2	0.1			90	90	90
				3.2.3	Compliance & enforcement	0.2	0.1			80	80	80
				3.2.4	Research plan	0.2	0.1			100	100	100
				3.2.5	Management performance evaluation	0.2	0.1			90	90	90

## 5.7 Summary of Conditions

The following table summarizes the four conditions arising from the SCS (2018) assessment of the spiny dogfish fishery and adds the two new conditions pertaining to P1 for winter skate. As

mentioned previously, it was determined by the gap analysis that no new assessment of Principle 2 components bycatch, ETP, habitat, or ecosystem was necessary for the present scope extension. The conditions that apply to this fishery pertain to ETP species, and condition numbering has been left consistent with numbering in the main dogfish assessment.

<b>Condition number</b>	<b>Condition</b>	<b>Performance Indicator</b>	<b>Related to previously raised condition? (Y/N/NA)</b>
<b>2-1</b>	By the fourth surveillance the fishery shall provide evidence that (1) the effects of the bottom trawl UoA on long-finned pilot whales are known and are highly likely to be within limits of national requirements for protection of marine protected mammals (Marine Mammal Protection Act, MMPA); (2) it's is highly likely that the bottom trawl fishery meets MMPA requirements, there would be direct demonstration that requirements for protection and rebuilding are being achieved.	2.3.1 (Trawl)	No
<b>2-2</b>	By the fourth surveillance the fishery shall provide evidence that (1) the effects of the gillnet UoA on Atlantic right whales are known and are highly likely to be within limits of national requirements for protection of marine protected mammals (Marine Mammal Protection Act, MMPA); (2) it's is highly likely that the gillnet fishery meets MMPA requirements, there would be direct demonstration that requirements for protection and rebuilding are being achieved.	2.3.1 (Gillnet)	No
<b>2-3</b>	By the fourth surveillance the fishery shall provide evidence that is an objective basis for confidence that the Atlantic Large Whale Take Reduction Plan strategy will work, based on information directly about the gillnet fishery and/or North Atlantic right whales.	2.3.2 (Gillnet)	No
<b>2-4</b>	By the fourth annual surveillance the fishery shall provide evidence that (A) sufficient information is available to allow fishery related mortality to be quantitatively estimated for Atlantic right whales AND (B) information is sufficient to support a full strategy to manage impacts	2.3.3 (Gillnet)	Yes

	on Atlantic right whales.		
1-1	By the 4 <sup>th</sup> annual surveillance for the winter skate UoAs (in 2022), sufficient relevant information related to stock structure, stock productivity, fleet composition and other data shall be available to support the harvest strategy.	1.2.3 (Winter skate; All gears)	No
1-2	By the 4 <sup>th</sup> annual surveillance for the winter skate UoAs (in 2022), the assessment of winter skate stock status shall take into account uncertainty sufficiently to reach the 80SG for scoring issue c.	1.2.4 (Winter skate; all gears)	No

## 5.8 Recommendations

No recommendations raised.

## 5.9 Determination, Formal Conclusion and Agreement

On the basis that the overall scores for P1, 2 and 3 are above 80 and no individual PI scored below 60, peer review and stakeholder comments, **MRAG Americas has determined that winter skate should be certified via scope extension to the US Atlantic Spiny Dogfish certificate. Note this is a draft determination and not a final certification decision.**

(REQUIRED FOR PCR)

- |  |
|--|
| 1. The report shall include a formal statement as to the certification action taken by the CAB's official decision-makers in response to the Determination recommendation. |
|--|

## 5.10 Changes in the fishery prior to and since Pre-Assessment

N/A

## References

- Cavanagh, M.F., and K. Damon-Randall. 2009. Status of the barndoor skate (*Dipturus laevis*). National Marine Fisheries Service Report, Northeast Regional Office. 77 pp.
- GARFO 2018a. Greater Atlantic Region Fisheries Office. Northeast Skate Complex. <https://www.greateratlantic.fisheries.noaa.gov/sustainable/species/skate/index.html>
- Magnuson-Stevens Fishery Conservation and Management Act as Amended through January 12, 2007. NOAA, U.S. Department of Commerce. 2007. 178pp (<http://www.nmfs.noaa.gov/msa2005/index.html>)
- NEFMC. 2003. Northeast Skate Complex Fishery Management Plan. New England Fishery Management Council in Coordination with the National Marine Fisheries Service (NMFS). <http://s3.amazonaws.com/nefmc.org/FINAL.Skate-FMP.EIS.FINAL.VOL.I.pdf>
- NEFMC 2008. Northeast Fishery Management Council Draft Plan for five-year research priorities for NEFMC Fishery Management Plans.
- NEFMC. 2017. Northeast Skate Complex FMP. <http://www.nefmc.org/management-plans/skates>
- NEFMC 2018b. Council Organizational Structure <https://www.nefmc.org/about/history>.
- NEFMC. 2018. Press Release: Skates: Council Approves Framework 6 to Prolong Wing Fishery and Enable Industry to Better Utilize TAL. June 12, 2018. New England Fishery Management Council. <https://www.nefmc.org/management-plans/skates>
- NEFSC. 2006. Status of Fishery Resources off the Northeastern US: Skate. <https://www.nefsc.noaa.gov/sos/spsyn/op/skate/>
- NEFSC. 2007. 44th Northeast Regional Stock Assessment Workshop (44th SAW) Assessment Summary Report. Document 07-03. <https://www.nefsc.noaa.gov/publications/crd/crd0703/crd0703.pdf>
- NEFSC. 2009. The Northeast Data Poor Stocks Working Group Report, *December 8-12, 2008 Meeting* Part A. Skate species complex, Deep sea red crab, Atlantic wolfish, Scup, and Black sea bass. Document 09-02A. <https://www.nefsc.noaa.gov/nefsc/saw/datapoor/DPReviewPanelReportFinal012009.pdf>
- NEFSC. 2017. 2017 NE Skate Stock Status Update (Sosebee Lead Analyst). [http://s3.amazonaws.com/nefmc.org/2.2-NEFSC\\_SkateMemo\\_July\\_2017.pdf](http://s3.amazonaws.com/nefmc.org/2.2-NEFSC_SkateMemo_July_2017.pdf)
- NMFS. 2018. Northeast Skate Complex. <https://www.greateratlantic.fisheries.noaa.gov/sustainable/species/skate/index.html>
- NMFS. 2010. Final Amendment 3 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD. Public Document. pp. 632.

NMFS 2018. Northeast Fisheries Observer Program data requisition (via email).  
Records on file at MRAG Americas.

NOAA 2018. Fisheries Office of Law Enforcement (OLE):  
<https://www.fisheries.noaa.gov/about/office-law-enforcement>

NOAA 2018a. Quarter 2018 Council Report. Northeast Enforcement Division. January 1 –  
March 31, 2018.

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.



# Appendices

## Appendix 1 Scoring and Rationales

### Appendix 1.1 Performance Indicator Scores and Rationale

#### 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.	It is highly likely that the stock is above the point where recruitment would be impaired.	There is a high degree of certainty that the stock is above the point where recruitment would be impaired.
	Met?	Are criteria met? Yes	Are criteria met? Yes	Are criteria met? Yes
		Winter Skate SG 60, 80 and SG 100 are met. The 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. Threshold has only been exceeded a few times in the 50-year time series (Figure 3.3-5). 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. The only uncertainty in this assessment is whether the choice of the threshold is appropriate or not. But given the biomass trends and recent levels, there is a high degree of certainty that the stock is above the point where recruitment would be impaired.		
b	Stock status in relation to achievement of MSY			
	Guide post		The stock is at or fluctuating around its target reference point.	There is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.
	Met?		Are criteria met? Yes	Are criteria met? Yes
	Justification	Winter Skate SG 80 and SG 100 are met. The biomass index for Winter skate is the basis of determining status. In the 50-year time series (Figure 3.3-5) it appears that the index is fluctuating around the target without major trends.		

		Importantly the index has been at or above the target for the last decade. Thus, there is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years.	
References	NEFSC. 2017. 2017 NE Skate Stock Status Update (Sosebee Lead Analyst). <a href="http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf">http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf</a>		
	NEFMC. 2017. Northeast Skate Complex FMP. <a href="http://www.nefmc.org/management-plans/skates">http://www.nefmc.org/management-plans/skates</a>		
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 relative to PRI (SIa)	Winter Skate Overfished 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.	Winter Skate 2.83 kg/tow	Winter Skate B2016/B over= 1.89
Reference point used in scoring stock relative to MSY (SIb)	Winter Skate BMSY target proxy: the mean weight per tow observed in the spring trawl survey from the selected reference time series	Winter Skate 5.66 kg/tow	Winter Skate B2016/Bmsy=0.95
Overall Performance Indicator Score Winter skate: All SG 60, 80 and 100 met; <b>score 100</b>			
Condition number (if relevant)			

## PI 1.1.2 – Reference Points

PI 1.1.2 Limit and target reference points are appropriate for the stock				
Scoring Issue		SG 60	SG 80	SG 100
a	Appropriateness of reference points			
	Guide post	Generic limit and target reference points are based on justifiable and reasonable practice appropriate for the species category.	Reference points are appropriate for the stock and can be estimated.	
	Met?	Are criteria met? Yes	Are criteria met? Yes	
	Justification	Winter skate SG 80 is met The index for Winter skate and the limit and target definitions are measurable and appropriate (the target is the mean of a recent period and the limit is the 75 <sup>th</sup> percentile around the mean). The approach is appropriate for data poor stocks per the Data Poor Workshop.		
b	Level of limit reference point			
	Guide post		The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity.	The limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.
	Met?		Are criteria met? Yes	Are criteria met? No
	Justification	Winter skate SG 80 is met, SG 100 is not The index for Winter skate and the limit and target definitions are measurable and appropriate ( <i>Overfished definition for both Little and Winter skate is 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 autumn trawl survey from the selected reference time series</i> ). The approach is appropriate for data poor stocks. However, the choice of the 75 <sup>th</sup> percentile is largely based on sustainability arguments of the long-term index with no trend, i.e. that there is a 75% chance that the stock has not been below the threshold and even when it did, the stock recovered fairly rapidly (Figure 3.3-5). But it has NOT been demonstrated that the limit reference point is set above the level at which there is an appreciable risk of impairing reproductive capacity following consideration of precautionary issues.		
c	Level of target reference point			

	Guide post		The target reference point is such that the stock is maintained at a level consistent with $B_{MSY}$ or some measure or surrogate with similar intent or outcome.	The target reference point is such that the stock is maintained at a level consistent with $B_{MSY}$ or some measure or surrogate with similar intent or outcome, or a higher level, and takes into account relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.
	Met?		Are criteria met? Yes	Are criteria met? No
	Justification	Winter skate SG 80 is met, SG 100 is not The index for Winter skate and the limit and target definitions are measurable and appropriate (the target is the mean of a recent period). The approach is appropriate for data poor stocks. However, this approach is essentially designed to maintain the status quo stock level without having strong evidence of whether the level is related to $B_{msy}$ or not. The lack of trend in the index and the related recruitment events are de facto support for the conclusion that the stock level is sustainable at an appropriate level (Figure 3.3-5). But it has NOT been demonstrated that the target reference point is such that the stock is maintained at a level consistent with $B_{MSY}$ or some measure or surrogate with similar intent or outcome, or a higher level, and considers relevant precautionary issues such as the ecological role of the stock with a high degree of certainty.		
d	Key low trophic level species target reference point			
	Guide post		For key low trophic level stocks, the target reference point takes into account the ecological role of the stock.	
	Met?		Are criteria met? (NA)	
	Justification	Winter skate are not low trophic level stocks		
References		NEFSC. 2017. 2017 NE Skate Stock Status Update (Sosebee Lead Analyst). <a href="http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf">http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf</a>  NEFMC. 2017. Northeast Skate Complex FMP. <a href="http://www.nefmc.org/management-plans/skates">http://www.nefmc.org/management-plans/skates</a>		
Overall Performance Indicator Score Winter skate: All SG 60, 80 met and no 100 met; <b>score 80</b>				
Condition number (if relevant)				

## PI 1.1.3 – Stock rebuilding

PI 1.1.3		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 strategy design			
	Guide post	Where stocks are depleted rebuilding strategies, which have a reasonable expectation of success, are in place.		Where stocks are depleted, strategies are demonstrated to be rebuilding stocks continuously and there is strong evidence that rebuilding will be complete within the specified timeframe.
	Met?	Are criteria met? (NA)		Are criteria met? (NA)
	Justification	Winter skate are not depleted, therefore 1.1.3 is not applicable		
b	Rebuilding timeframes			
	Guide post	A rebuilding timeframe is specified for the depleted stock that is the shorter of 30 years or 3 times its generation time. For cases where 3 generations are less than 5 years, the rebuilding timeframe is up to 5 years.	A rebuilding timeframe is specified for the depleted 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 depleted stock.
	Met?	Are criteria met? (NA)	Are criteria met? (NA)	Are criteria met? (NA)
	Justification	Winter skate are not depleted, therefore 1.1.3 is not applicable		
c	Rebuilding evaluation			
	Guide post	Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within a specified timeframe.	There is evidence that they are rebuilding stocks, or it is highly likely based on simulation modelling or previous performance that they will be able to rebuild the stock within a specified timeframe.	
	Met?	Are criteria met? (NA)	Are criteria met? (NA)	Are criteria met? (NA)
	Justification	Winter skate are not depleted, therefore 1.1.3 is not applicable		

References	List any references here, including hyperlinks to publically-available documents.	
Overall Performance Indicator Score	NA	
Condition number (if relevant)		

## 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 the target and limit reference points.	The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points.	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.
	Met?	Are criteria met? Yes	Are criteria met? Yes	Are criteria met? Yes
	Justification	<p>Winter skate SG 60, 80 and 100 are met</p> <p>The Winter 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 sections 3.3.2 and 3.3.3). For the Skate Complex, the scientifically derived ABC set by management as the Annual Catch Limit. Then the ACL is reduced by a rather large 25% 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.</p> <p>As the stocks change, the catch advice is adjusted with the rule in which catch is adjusted up or down using the trend percentage of the smoothed three-year running average of the biomass indices (section 3.3.3). 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</p>		
	Harvest strategy evaluation			
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?	Are criteria met? Yes	Are criteria met? Yes	Are criteria met? No

	Justification	Winter skate SG 60, 80 are met and SG 100 is not 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 3.3.2). But there has been no full evaluation of the strategy through simulation and/or stock assessments and Management Strategy Evaluation.		
c	Harvest strategy monitoring			
	Guide post	Monitoring is in place that is expected to determine whether the harvest strategy is working.		
	Met?	Are criteria met? Yes		
	Justification	Winter skate SG 60 is met Catches, indices, surveys and size frequencies are monitored annually (section 3.3.2). These are reported and implemented into the FMP TAL setting process (section 3.3.3). Realized catches and indices are compared to the ACLs and TALs to determine whether the harvest strategy is working.		
d	Harvest strategy review			
	Guide post			The harvest strategy is periodically reviewed and improved as necessary.
	Met?			Are criteria met? Yes
	Justification	Winter skate SG 100 is met The harvest strategy is reviewed annually to determine if objectives are being achieved. Through the New England Fishery Management Council that 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 3.3.3).		
e	Shark finning			
	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?	Are criteria met? (NA)	Are criteria met? (NA)	Are criteria met? (NA)
	Justification	While winter skate are periodically targets of the dogfish fishery, the primary driver of the fishery is usually the dogfish target. Finning of the sharks is not allowed and there is a high degree of certainty that it is not taking place.		
References		NEFSC. 2017. 2017 NE Skate Stock Status Update (Sosebee Lead Analyst). <a href="http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf">http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf</a>  NEFMC. 2017. Northeast Skate Complex FMP. <a href="http://www.nefmc.org/management-plans/skates">http://www.nefmc.org/management-plans/skates</a>		



Overall Performance Indicator Score	Winter skate: All SG 60 and SG 80 met, 2 of 3 SG 100 met; <b>score 90</b>
Condition number (if relevant)	

## 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 harvest rules are in place that are consistent with the harvest strategy and which act to reduce the exploitation rate as limit reference points are approached.	Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.	
	Met?	Are criteria met? Yes	Are criteria met? Yes	
	Justification	Winter skate SG 60 and SG 80 are met The Harvest Control Rule (HCR) for Winter skate is a well-defined management procedure in which ABC, ACL and ACT are defined through formalized formulae established 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 3.3.3). Clearly, as the biomass index declines and approaches or exceeds the threshold, the catch levels are reduced, and catches are reduced for precipitously by the rule if thresholds are exceeded. So, well-defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.		
b	HCRs account for uncertainty			
	Guide post		The selection of the harvest control rules takes into account the main uncertainties.	The design of the harvest control rules takes into account a wide range of uncertainties.
	Met?		Are criteria met? Yes	Are criteria met? No
	Justification	Winter skate SG 80 is met, and SG 100 is not met The main uncertainty addressed in the Winter skate HCR is the definition of the threshold based on the 75 <sup>th</sup> percentile of the index and a 25% buffer for the skate complex definition of ACL relative to ABC. These act in concert to be precautionary in the face of uncertainty. But this does not account for a wider set of uncertainties that likely affect Winter skate such as uncertainty in basic productivity estimates. The selection of the harvest control rules considers the main uncertainties.		

<b>C</b>	HCRs evaluation			
	Guide post	There is some evidence that tools used to implement harvest control rules 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 harvest control rules.	Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the harvest control rules.
	Met?	Are criteria met? Yes	Are criteria met? Yes	Are criteria met? No
	Justification	<p>Winter skate</p> <p>SG 60, 80 are met and SG 100 is not</p> <p>The harvest control rule has not have been fully tested but evidence exists that it is achieving its objectives in that the biomass thresholds have not been exceeded (section 3.3.2) and catch levels are well within the HCR established limits. So, the tools in use are appropriate and effective in achieving the exploitation levels required under the harvest control rules.</p>		
References		<p>NEFSC. 2017. 2017 NE Skate Stock Status Update (Sosebee Lead Analyst). <a href="http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf">http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf</a></p> <p>NEFMC. 2017. Northeast Skate Complex FMP. <a href="http://www.nefmc.org/management-plans/skates">http://www.nefmc.org/management-plans/skates</a></p>		
Overall Performance Indicator Score			Winter skate: All SG 60 and SG 80 met, no SG 100 met; <b>score 80</b>	
Condition number				

## 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
<b>a</b>	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 is available to support the harvest strategy.	A comprehensive range of information (on stock structure, stock productivity, fleet composition, stock abundance, fishery removals and other information such as environmental information), including some that may not be directly related to the current harvest strategy, is available.

	Met?	Are criteria met? Yes	Are criteria met? No	Are criteria met? No
	Justification	<p>Winter skate</p> <p>SG 60 is met SG 80 is not met and SG 100 is not met</p> <p>The range of information available for assessments and harvest strategy support for Winter skate is limited primarily to survey indices of abundance and limited size data. For those reasons the skate complex status was address by the Data Poor Working Group in 2008. Their conclusions were that status determination would have to depend on Bmsy proxies from surveys. That situation has not changed. The use of those survey indices as the basis for decision rules has largely been successful. Thus, some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy (SG 60 met). But this information base is not sufficient to support the harvest strategy. There is little information on potential stock productivity that can be directly related the amount of catch that might be allowed. While the catch decision rules appear to have been effective, they are not directly related to the assessment and index monitoring (SG 80 not met)</p>		
b	Monitoring			
	Guide post	Stock abundance and fishery removals are monitored and at least one indicator is available and monitored with sufficient frequency to support the harvest control rule.	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.	All information required by the harvest control rule is monitored with high frequency and a high degree of certainty, and there is a good understanding of inherent uncertainties in the information [data] and the robustness of assessment and management to this uncertainty.
	Met?	Are criteria met? Yes	Are criteria met? Yes	Are criteria met? No
	Justification	<p>Winter skate</p> <p>SG 60, 80 is met and SG 100 is not met</p> <p>Abundance surveys are conducted twice annually, all landings are monitored, and discards are estimated these 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. But not all information required by the harvest control rule is monitored with high frequency and a high degree of certainty,</p>		
c	Comprehensiveness of information			
	Guide post		There is good information on all other fishery removals from the stock.	
	Met?		Are criteria met? Yes	

	Justification	<p>Winter skate</p> <p>SG 80 is met</p> <p>Removals including landings, discards, state catches are all monitored. There is good information on all fishery removals from the stock.</p>
References		<p>NEFSC. 2009. The Northeast Data Poor Stocks Working Group Report, <i>December 8-12, 2008 Meeting</i> Part A. Skate species complex, Deep sea red crab, Atlantic wolfish, Scup, and Black sea bass. Document 09-02A. <a href="https://www.nefsc.noaa.gov/nefsc/saw/datapoor/DPReviewPanelReportFinal012009.pdf">https://www.nefsc.noaa.gov/nefsc/saw/datapoor/DPReviewPanelReportFinal012009.pdf</a></p> <p>NEFSC. 2017. 2017 NE Skate Stock Status Update (Sosebee Lead Analyst). <a href="http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf">http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf</a></p> <p>NEFMC. 2017. Northeast Skate Complex FMP. <a href="http://www.nefmc.org/management-plans/skates">http://www.nefmc.org/management-plans/skates</a></p>
Overall Performance Indicator Score		Winter skate: All SG 60 met; 2 of 3 SG 80 met, no SG 100 met; <b>score 75</b>
Condition number (if relevant)		<b>Winter Skate Condition 1-1</b>

## 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 is appropriate for the stock and for the harvest control rule and takes into account the major features relevant to the biology of the species and the nature of the fishery.
	Met?		Are criteria met? Yes	Are criteria met? No
	Justification	Winter skate SG 80 is met, SG 100 is not met Winter skate “assessment” is index based as would be expected for a data poor stock. The index HCR is appropriate for the current stock and the HCR. However, there are a large number of features relevant to these skate’s biology and fisheries including growth rates, mortality and spawning productivity. Thus SG 100 is not met		
b	Assessment approach			

	Guide post	The assessment estimates stock status relative to reference points		
	Met?	Are criteria met? Yes		
	Justification	The winter skate assessment estimates stock status relative to reference points (section 3.3.2) are estimated and monitored. Overfishing and overfished definitions are based on the historical time series of the biomass survey index. SG 60 met		
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?	Are criteria met? Yes	Are criteria met? No	Are criteria met? No
	Justification	Winter skate SG 60 is met, but not SG 80, SG100 The status monitoring process (assessment) relies on the biomass index, whereby certain levels of that index that have occurred in the past have been used to define overfishing and overfished criteria (sec 3.3.2). It is clear in this assessment what the limitations of this approach are, and the uncertainties occur when using these methods. Thus, SG 60 is met.  However, the assessment does not take into account most if not all of the uncertainties. The pragmatic specifications of overfishing and overfished levels were chosen appropriately. But 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 (2009). 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 (SG 80 not met)		
d	Evaluation of assessment			
	Guide post			The assessment has been tested and shown to be robust. Alternative hypotheses and assessment approaches have been rigorously explored.
	Met?			Are criteria met? No
	Justification	The winter skate assessment has not been tested to show if it is robust (section 3.3.2).		

e	Peer review of assessment			
	Guide post		The assessment of stock status is subject to peer review.	The assessment has been <b>internally and externally</b> peer reviewed.
	Met?		Are criteria met? Yes	Are criteria met? No
	Justification	<p>Winter skate</p> <p>SG 80 is met, but not SG 100</p> <p>Review of Winter skate assessments are subject to peer review through annual reviews of assessment advice conducted by the Scientific and Statistical Committee of the New England Fishery Management Council. These are part of the FMP process. Additionally, the assessment approach was reviewed by internal and external peers in the Data Poor Workshop (2009). However, this type of review has not been revisited since then. Therefore, it is determined that the assessment is not now being reviewed at the SG 100 level.</p>		
References		<p>NEFSC. 2009. The Northeast Data Poor Stocks Working Group Report, <i>December 8-12, 2008 Meeting</i> Part A. Skate species complex, Deep sea red crab, Atlantic wolffish, Scup, and Black sea bass. Document 09-02A. <a href="https://www.nefsc.noaa.gov/nefsc/saw/datapoor/DPReviewPanelReportFinal012009.pdf">https://www.nefsc.noaa.gov/nefsc/saw/datapoor/DPReviewPanelReportFinal012009.pdf</a></p> <p>NEFSC. 2017. 2017 NE Skate Stock Status Update (Sosebee Lead Analyst). <a href="http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf">http://s3.amazonaws.com/nefmc.org/2.2-EFSC_SkateMemo_July_2017.pdf</a></p> <p>NEFMC. 2017. Northeast Skate Complex FMP. <a href="http://www.nefmc.org/management-plans/skates">http://www.nefmc.org/management-plans/skates</a></p>		
Overall Performance Indicator Score			Winter skate: All SG 60 met; 2 of 3 SG 80 met, and 0 of 4 SG 100 met; <b>score 75</b>	
Condition number (if relevant)			<b>Winter Skate 1-2</b>	

## Principle 2

Our gap analysis found that most of the Principle 2 is held in common between the certified spiny dogfish fishery (SCS 2018) and the Winter skate UoAs of the present assessment. However, since Winter skate was Principle 2 main retained species in the dogfish assessment, removing it from this component and putting it in Principle 1 means that the scoring element composition in the retained species component will be different. In addition, updated catch composition data from NEFOP (see Table 3) reveals a slightly different composition of main retained species. Information and management base for the fishery as a whole is consistent with that which was reported in SCS 2018, therefore only the outcome PI (2.1.1) was reevaluated for Principle 2.

### PI 2.1.1 – Retained species outcome

PI 2.1.1		The fishery does not pose a risk of serious or irreversible harm to the retained species and does not hinder recovery of depleted retained species					
Scoring Issue		SG 60		SG 80		SG 100	
a	Retained species stock status						
	Guide post	Main retained species are likely to be within biologically based limits (if not, go to scoring issue c below).		Main retained species are highly likely to be within biologically based limits (if not, go to scoring issue c below).		There is a high degree of certainty that retained species are within biologically based limits and fluctuating around their target reference points.	
	Met?	Are criteria met? Yes		Are criteria met? Yes		Are criteria met? No	
	Justification	Scoring Element (main)	Score	Justification			
		Monkfish	80	See SCS 2018			
		Pollock	80	See SCS 2018			
		Little skate	80	See SCS 2018			
		Little/winter skate	80	See SCS 2018			
		Silver hake	80	See SCS 2018			
		Acadian Redfish	80	See SCS 2018			
		Longfin squid	80	See SCS 2018			
		Tilefish	80	See SCS 2018			
		Shortfin squid	80	Amendment 8 (MAFMC 1998) of the FMP specifies B <sub>MSY</sub> as 39,300 MT, MSY as 24,000 MT, and F <sub>MSY</sub> as 1.22 per year. Fishery yield closely follows abundance indices showing recruitment to this short-lived stock is driven by environmental factors. Historical survey indices indicate that recruitment has not been impaired by fishing. It is highly likely that this stock is within biologically based limits.			
	Barndoor skate	80	The NEFMC Skate Plan Development Team (PDT), using input from the workshop, designated overfishing definitions, or biological reference points (BRPs), for each member of the skate complex. The PDT concluded that if the barndoor skate three year moving average of the autumn survey mean weight per tow is less than 0.81 kg per tow, then barndoor skates are considered overfished. If the survey biomass declines for three consecutive years, or declines by more than 30% in one				

				year, the PDT considers F to be greater than the maximum sustainable yield (Fmsy) and barndoor skates, as well as the six other members of the Northeast skate complex, are experiencing overfishing. Thus, this scoring element is highly likely to be within biologically based limits and the SG80 is achieved.
		Smooth dogfish	80	NMFS recently assessed the status of these species for the first time using the Southeast Data, Assessment, and Review (SEDAR) process. The final stock assessment (SEDAR 39) was finalized and peer reviewed in March 2015. This assessment concluded that the Atlantic smooth dogfish stock is not considered overfished nor is overfishing occurring. Thus, this scoring element is highly likely to be within biologically based limits and the SG80 is achieved.
b	Target reference points			
	Guide post			Target reference points are defined for retained species.
	Met?			Are criteria met No
	Justification	For a full justification see SCS 2018. TRPs are defined for all main retained species but not all minor retained species. Thus, the SG100 is not met.		
c	Recovery and rebuilding			
	Guide post	If main retained species are outside the limits there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species.	If main retained species are outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding.	
	Met?	Are criteria met? N/A	Are criteria met? N/A	
	Justification	No main retained species are outside of safe biological limits. Thus, this scoring issue does not apply.		
d	Measures if poorly understood			
	Guide post	If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery.		
	Met?	Are criteria met? Y		
	Justification	See SCS 2018.		



References	FR Doc. <a href="#">2015-15809</a> Filed 6-26-15; 8:45 am	
	SCS 2018	
	Cavanagh, M.F., and K. Damon-Randall. 2009. Status of the barndoor skate ( <i>Dipturus laevis</i> ). National Marine Fisheries Service Report, Northeast Regional Office. 77 pp.	
	NMFS. 2010. Final Amendment 3 to the Consolidated Atlantic Highly Migratory Species Fishery Management Plan. National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Office of Sustainable Fisheries, Highly Migratory Species Management Division, Silver Spring, MD. Public Document. pp. 632.	
Overall Performance Indicator Score		<b>80 (all UoAs)</b>
Condition number (if relevant)		<b>N/A</b>

### Principle 3

For this scope extension, the monkfish and Winter skate UoAs are separately scored for PIs 3.2.1, 3.2.2, 3.2.3, 3.2.4, and 3.2.5. Our gap analysis found that PIs 3.1.1-3.1.4 (governance and policy) are held in common with the dogfish assessment (SCS 2018) and the scoring is therefore not repeated here.

## PI 3.2.1 – Fishery-specific objectives

PI 3.2.1 The fishery 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's 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's 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's management system.
	Met?	Y	Y	Y
	Justification	<p>Winter skate:</p> <p>The overall goal of the Skate FMP is consistent with the requirements of the MSFCMA and other applicable laws to research and manage the Northeast skate complex at long-term sustainable levels. The NEFMC has identified the following FMP objectives (NEFMC 2003):</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> <li>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.</li> <li>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</li> </ol>		

		<p>identification guide.</p> <p>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.</p> <p>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.</p> <p>This fishery has met the SG100 level for this scoring issue.</p>
References	NEFMC 2003, NEFMC 2018a.	
Overall Performance Indicator Score		<b>Winter Skate 100</b>
Condition number (if relevant)		

## 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 under assessment.				
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?	Y	Y	
	Justification	The US Atlantic winter skate fishery is managed under the MSFCMA, which sets out the decision-making process used by regional fishery management councils in the development of fishery management plans. The Northeast Skate Complex FMP contain measures and strategies to achieve the fishery specific-objectives.  The winter skate fishery meets the SG 80 level for this scoring issue.		
b	Responsiveness of decision-making processes			

	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 take some account of the wider implications of decisions.	Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions.	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 wider implications of decisions.
	Met?	Y	Y	N
	Justification	<p>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 meets several times annually, and adjustments to the FMP is done in a timely and adaptive manner.</p> <p>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. However, because the SAFE Report is out of date, which supplements and updates (where possible) the information contained in the FMP, it is not clear that the decision-making processes respond to all issues identified. The score was reduced to an 80 for this scoring issue.</p>		
C	Use of precautionary approach			
	Guide post		Decision-making processes use the precautionary approach and are based on best available information.	
	Met?		Y	
	Justification	<p>The following justification is from the SCS 2018 Public Certification Report for US Atlantic Spiny Dogfish:</p> <p>The NEFMC and MAFMC 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)).”</p> <p>The 2012 – 2013 Skate specifications is an action developed by the New England Fishery Management Council pursuant to the provisions of the Northeast Skate Complex Fishery Management Plan. The catch limits are supported by the best available scientific information.</p>		

d	Accountability and transparency of management system and decision-making process			
	Guide post	Some information on fishery performance and management action is generally available on request to stakeholders.	Information on fishery 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 fishery 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?	Y	Y	Y
	Justification	The Councils' process for formal reporting to stakeholders is the same as in the US Atlantic spiny dogfish report. Please see SCS 2018 for a detailed explanation of the regional Councils reporting to stakeholders. The GARFO website has detailed instructions on how to stay informed, get involved in Federal Fisheries Management and links for publications. There are also links to meeting documents, schedules, bulletins, newsletters, guidelines for making public comments, and calendars for upcoming meetings on the NEFMC website.		
e	Approach to disputes			
	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?	Y	Y	Y
	Justification	NOAA has an extensive Dispute Resolution Process, defined by the Administrative Dispute Resolution Act of 1996, Pub. L. No. 104-320. They have an Alternative Dispute Resolution (ADR) process that consists of several approaches used to resolve conflict other than litigation if possible. The ADR process uses mediation, consultation and facilitated problem solving to resolve disputes in a confidential manner ( <a href="http://www.wfm.noaa.gov/adr/">www.wfm.noaa.gov/adr/</a> ).  It should be noted that, to the assessment team's knowledge, no current legal disputes are occurring in the US Atlantic winter skate fishery, nor is there evidence of non-compliance that threatens the conservation and sustainability objectives.		
References		NEFMC 2003, NEFMC 2018a.; NEFMC 2018b; SCS 2018; <a href="http://www.wfm.noaa.gov/adr/">www.wfm.noaa.gov/adr/</a>		

Overall Performance Indicator Score	<b>Winter Skate 90</b>
Condition number (if relevant)	

## PI 3.2.3 – Compliance and enforcement

PI 3.2.3 Monitoring, control and surveillance mechanisms ensure the fishery's management measures are enforced and complied with.				
Scoring Issue	SG 60		SG 80	SG 100
a	MCS implementation			
	Guide post	Monitoring, control and surveillance mechanisms exist, are implemented in the fishery under assessment and there is a reasonable expectation that they are effective.	A monitoring, control and surveillance system has been implemented in the fishery under assessment 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 under assessment and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.
	Met?	Y	Y	N
	Justification	<p>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:</p> <ul style="list-style-type: none"> <li>• Fishing permit requirements</li> <li>• Fishing permit and fishing vessel registers</li> <li>• Vessel and gear marking requirements</li> <li>• Fishing gear and method restrictions</li> <li>• Reporting requirements for catch, effort, and catch disposition</li> <li>• Vessel inspections</li> <li>• Record keeping requirements</li> <li>• Auditing of licensed fish buyers</li> <li>• Control of transshipment</li> <li>• Monitored unloads of fish</li> <li>• Information management and intelligence analysis</li> <li>• Analysis of catch and effort reporting and comparison with landing and trade data to confirm accuracy</li> <li>• Boarding and inspection by fishery officers at sea</li> <li>• Aerial and surface surveillance</li> </ul>		

		<p>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.</p> <p>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.</p> <p>There are monitoring, control and surveillance mechanisms in place, however no evidence was provided to the assessment team that the monitoring, control and surveillance system demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. Documentation was requested but could not be provided due to confidentiality issues within the various fisheries. Although no existing documents demonstrated the ability of the monitoring, control and surveillance system to enforce relevant management measures, no evidence of non-compliance within this fishery was found in the OLE Press Release, or in the OLE Enforcement Annual Report Fiscal Year 2017. Anecdotal information and the expert opinion of OLE law enforcement officers indicate that the fishers comply with the management system under assessment and provide information of importance to the effective management of the fishery.</p> <p>The winter skate fishery meets the SG 80 level, but the SG100 level is not met.</p>		
b	Sanctions			
	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?	Y	Y	N
	Justification	<p>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.</p> <p>Based on personal interviews with OLE personnel, it can be said that sanctions to deal with non-compliance exist, are consistently applied and are thought to provide effective deterrence. No information was received that can verify the effectiveness of the sanctions and therefore it cannot be said with certainty that these sanctions are demonstrably effective.</p> <p>These fisheries meet the SG 80 level, but do not meet the SG 100 level for this scoring issue.</p>		
	c	Compliance		

	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?	Y	Y	N
	Justification	Interviews with OLE personnel indicate that fishers in skate fisheries generally comply with the management system under assessment, including providing information of importance to the effective management of the fishery. After review of the 2018 Council Report for the Northeast Enforcement Division, there were not specific violations that apply to the NEFMC area or the skate fishery.  Without further documentation or evidence on enforcement efforts, it cannot be said with a high degree of confidence that fishers comply with the management system. These fisheries meet the SG80 level, but the SG100 level has not been met.		
d	Systematic non-compliance			
	Guide post		There is no evidence of systematic non-compliance.	
	Met?		Y	
	Justification	To the assessment team's knowledge, there is no evidence of systematic non-compliance for the skate fishery.		
References		NOAA 2018 OLE; NOAA 2018a; SCS 2018; 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.		
Overall Performance Indicator Score			Winter Skate 80	
Condition number (if relevant)				



## PI 3.2.4 – Research Plan

### PI 3.2.4 The fishery has a research plan that addresses the information needs of management.

Scoring Issue		SG 60	SG 80	SG 100
a	Research Plan			
	Guide post	Research is undertaken, as required, to achieve the objectives consistent with MSC's Principles 1 and 2.	A research plan provides the management system with a strategic approach to research and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.	A comprehensive research plan provides the management system with a coherent and strategic approach to research across P1, P2 and P3, and reliable and timely information sufficient to achieve the objectives consistent with MSC's Principles 1 and 2.
	Met?	Y	Y	Y
	Justification	The Magnuson-Stevens Reauthorization Act of 2006 requires each regional fishery management council to develop a five-year research priority plan (MSFCMA 1996, SCS 2018). See SCS 2018 for a detailed review of the MAFMC.		
		The NEFMC also has a research plan for both the Northeast Skate Complex. Their research Priorities are as follows: 1. Discard mortality studies (e.g., tagging studies) on commercial vessels in various fisheries - determine rates by gear type, area, season, depth, and bottom type for all seven species with an emphasis on overfished species (thorny, winter, barndoor, and little skates) 2. Gear research on trawls, gillnets, and dredges to improve skate selectivity and skate discard survival, including designs that would reduce incidental catches of skates in non-directed fisheries (primarily trawl and gillnet), while maximizing the catch of target (non-skate) species 3. Development of effective species identification methods for fishermen, dealers, and port samplers. This could include an inexpensive biochemical/genetic assay method, better training, and better morphological keys for juvenile skates 4. Directed skate research trips to survey and study: • species distribution (particularly in waters deeper than sampled by the NMFS survey) • catch (species) composition • collect biological samples and fill in remaining gaps in age, growth, maturity, and fecundity of managed skates • predator/prey interactions and trophic interactions between skate species in the complex and between skates and other bottom species that occupy the same habitats • electronic tagging and telemetry to address short- and long-term movements 5. Investigate the influence of physical factors (including environmental changes) on shifts in range and distribution of species within the skate complex		
b	Research results			

	Guide post	Research results are available to interested parties.	Research results are disseminated to all interested parties in a timely_fashion.	Research plan and results are disseminated to all interested parties in a timely fashion and are widely and publicly available.
	Met?	Y	Y	Y
	Justification	Research results are disseminated to all interested parties and widely publicly available via the Councils' websites, meetings, stock assessment workshops, and presentations. Both these fisheries meet the SG 100 level for this scoring issue.		
References		MSFCMA 1996, NEFMC 2008, SCS 2018		
Overall Performance Indicator Score			<b>Winter Skate 100</b>	
Condition number (if relevant)				

## Appendix 1.2 Risk Based Framework (RBF) Outputs

N/A-the RBF was not used for this scope extension assessment.

## Appendix 1.3 Conditions

Four conditions were raised as part of the full reassessment of US Atlantic spiny dogfish, to which this assessment is a scope extension. These conditions pertained to the impacts of the trawl and gillnet fleets to ETP whales. As the trawl and gillnet fleets also prosecute Winter skate which are the subject of the current scope extension, the conditions will apply to these new UoAs as well. Two new conditions in Principle 1 for winter skate were added as a result of this scope extension. These are listed as Conditions 1-1 and 1-2 and placed after the existing P2 conditions in the tables below to maintain some consistency with the spiny dogfish report (SCS 2018).

**Table 12. Condition 2-1 (Trawl)**

<b>2.3.1 Sla and Slb</b>	<b>SG 80</b> <b>The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.</b>
<b>Score</b>	75
<b>Rationale</b>	<p>Summary for PI 2.3.1 Sla Small Cetaceans Scoring Element (Bottom Trawl)</p> <p>The 2010-2014 average annual mortality of long-finned pilot whales attributed to the northeast bottom trawl was 33.2 animals (CV=0.15). The PBR for long-finned pilot whales is of 35 whales; the total reported takes across all fisheries exceeded this at 38. Annual mortality and serious injury of a stock in a given fishery higher than 50% of the PBR merits a designation of Category I under the MMPA. As of the 2017 List of Fisheries (LOF), this fishery continues to be classified under Category II; and there is no evidence that additional management actions to reduce take are being developed or implemented. The assessment team acknowledges that there is significant uncertainty in the stock assessment informing the PBR and that the 2017 stock assessment <a href="#">report</a> states survey results are impartial and likely underestimate overall abundance of this species. Nonetheless, the published stock assessment is expected to represent the best available information used for management. Due to the inconsistency between the estimated annual mortality to its PBR and the MMPA categorization of the trawl fishery does not meet the SG80.</p>
<b>Condition</b>	<b>2-1</b> By the fourth surveillance the fishery shall provide evidence that (1) the effects of the bottom trawl UoA on long-finned pilot whales are known and are highly likely to be within limits of national requirements for protection of marine protected mammals (Marine Mammal Protection Act, MMPA); (2) it's is highly likely that the bottom trawl fishery meets MMPA requirements, there would be direct demonstration that requirements for protection and rebuilding are being achieved.

<p><b>Milestones</b></p>	<p><b>Year 1 Surveillance (2019).</b> The fishery shall provide evidence of supporting federal management agency actions to address the discrepancy between the long-finned pilot whale SAR and PBR and Northeast Bottom Trawl LOF classification such that bottom trawl fishery is meeting the MMPA requirements.</p> <p><b>Year 2 Surveillance (2020)</b> The fishery shall present evidence of continued support of actions taken by the federal management agency towards meeting the national requirements for the protection of long-finned pilot whales by the trawl fishery.</p> <p><b>Year 3 Surveillance (2021).</b> The fishery shall present evidence of continued support of actions taken by the federal management agency to further progress 1 towards meeting the national requirements for the protection of long-finned pilot whales by the trawl fishery.</p> <p><b>Year 4 Surveillance (2022).</b> The fishery shall present evidence of meeting national requirements for the protection of long-finned pilot whales.</p>
<p><b>Client action plan</b></p>	<p>At the first annual audit, the clients will present evidence of supporting federal management agency actions to address the discrepancy between the long-finned pilot whale SAR and PBR and Northeast Bottom Trawl LOF classification such that bottom trawl fishery is meeting the MMPA requirements.</p> <p>At the second annual audit, the clients will present evidence of continued support of actions taken by the federal management agency towards meeting the national requirements for the protection of long-finned pilot whales by the trawl fishery.</p> <p>At the third annual audit, the clients will present evidence of continued support of actions taken by the federal management agency to further progress towards meeting the national requirements for the protection of long-finned pilot whales by the trawl fishery.</p> <p>At the fourth annual audit, the clients will present evidence of meeting national requirements for the protection of long-finned pilot whales.</p>

**Table 13. Condition 2-2 (Gillnet)**

<b>2.3.1 Sla and Slb</b>	<b>SG 80</b> <b>The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species.</b>
<b>Score</b>	75
<b>Rationale</b>	<p>North Atlantic Right whale</p> <p>Right whales are categorized as a strategic stock because the level of direct human-caused mortality exceeds the PBR level of one.</p> <p>NMFS has determined that the annual mortality and serious injury of Atlantic right whales in the Northeast sink gillnet fishery is greater than or equal to 50% of the PBR level for this stock, classifying this fishery under Category I. On account of their classification as a Category I fishery and its interaction with a strategic stock, the fishery is required to follow the ALWTRP regulations including spatial and seasonal closures, gear modifications and gear marking requirements. For more details on these management measures please see the background (p. 68). For the fishery to meet SG60 the team needs to determine it is likely (60% probability) that the gillnet fishery is complying with these requirements, the SG80 requires a 'highly likely' probability (70th percentile) (MSC CR v1.3 CB3.2.3). The interpretation of likelihood levels may be either qualitative (plausible argument, empirical observation of sustainability and qualitative risk) or quantitative (measured data relevant to the fishery, statistical analysis, quantitative risk assessment) (MSC v2.0 GSA 3.2.4).</p> <p>At the November 2017 'Atlantic Large Whale Take Reduction Team Monitoring Webinar' the United States Coast Guard (USCG) reported on "[...] three cases involving violations of gillnet vessels in the Northeast and mid-Atlantic. These cases included failure to have an anchor, buoy lines with no markings, and failure to use weak links." And concluded that across all fisheries, there is an 87.4% compliance rate with gear regulations (NMFS 2017b). The overall compliance rate across all fisheries &gt;80% suggests that the gillnet fishery is likely complying with the requirements to reduce take of right whales meeting SG60. However, because of the limited compliance verification, the limited information on entanglement events, and evidence of some non-compliance events, reduce the confidence that the gillnet fishery is highly likely to be complying with national requirements for protection and rebuilding (MSC CR v2.0 GSA3.2). The fishery does not meet SG80.</p> <p>Large Whales – Gillnet (SG60)</p>
<b>Condition</b>	<b>2-2.</b> By the fourth surveillance the fishery shall provide evidence that (1) the effects of the gillnet UoA on Atlantic right whales are known and are highly likely to be within limits of national requirements for protection of marine protected mammals (Marine Mammal Protection Act, MMPA); (2) it's highly likely that the gillnet fishery meets MMPA requirements, there would be direct demonstration that requirements for protection and rebuilding are being achieved
<b>Milestones and Client Action Plan</b>	See Table 16

	<p>qualitative risk) or quantitative (measured data relevant to the fishery, statistical analysis, quantitative risk assessment) (MSC v2.0 GSA 3.2.4).</p> <p>At the November 2017 'Atlantic Large Whale Take Reduction Team Monitoring Webinar' the United States Coast Guard (USCG) reported on "[...] three cases involving violations of gillnet vessels in the Northeast and mid-Atlantic. These cases included failure to have an anchor, buoy lines with no markings, and failure to use weak links." And concluded that across all fisheries, there is an 87.4% compliance rate with gear regulations (NMFS 2017b). The overall compliance rate across all fisheries &gt;80% suggests that the gillnet fishery is likely complying with the requirements to reduce take of right whales meeting SG60. However, because of the limited compliance verification, the limited information on entanglement events, and evidence of some non-compliance events, reduce the confidence that the gillnet fishery is highly likely to be complying with national requirements for protection and rebuilding (MSC CR v2.0 GSA3.2). The fishery does not meet SG80.</p> <p>Large Whales – Gillnet (SG60)</p>
<b>Condition</b>	<p><b>2-2.</b> By the fourth surveillance the fishery shall provide evidence that (1) the effects of the gillnet UoA on Atlantic right whales are known and are highly likely to be within limits of national requirements for protection of marine protected mammals (Marine Mammal Protection Act, MMPA); (2) it's highly likely that the gillnet fishery meets MMPA requirements, there would be direct demonstration that requirements for protection and rebuilding are being achieved</p>
<b>Milestones and Client Action Plan</b>	See Table 16

**Table 14. Condition 2-3 (Gillnet)**

<b>2.3.2 SIb</b>	<b>SG 80: There is an objective basis for confidence that the strategy will work, based on information directly about the fishery and/or the species involved.</b>
<b>Score</b>	75
<b>Rationale (PI 2.3.2 SIb)</b>	<p>The Atlantic Large Whale Take Reduction Plan (ALWTRP) went into effect in 1997 reduce the serious injury and mortality of right, humpback, and fin whales in U.S. commercial fisheries.</p> <p>The 5-Year Review of the status of North Atlantic right whale recovery completed in 2017, concluded that the status of this species has not improved since the last review in 2012. The 5-year rate of serious injuries and mortalities of 4.65 from 2010-2014 surpasses the PBR of one, there is a decreasing trend for the population estimate (Pace et al., 2017), the implemented regulations have failed to reduce the frequency and number of observed/reported entanglement events (NMFS 2017a) , and the increases in fishing rope strength may be leading to higher rates of entanglements (Knowlton et al 2015).</p> <p>Confirmed fishery-caused mortality and injury events are considered a minimum; not all entangled whales are discovered or reported. Because entanglement events for this species are unobserved in the majority of the cases, no gear is documented,</p>

	<p>recovered, or identifiable. Over 95% of mortality/serious injury events recorded between 2010 and 2014 did not have sufficient information to assign the event to a specific fishery/gear type. Though during period no observed mortalities were attributed to the gillnet fishery, there are eight cases between 2010-2015 of whale entanglements determined to be gillnet gear (Consortium for Wildlife Bycatch Reduction: Right Whale Entanglement Case Studies).</p> <p>Sublethal effects that hinder recovery are not directly related to the national limits, which are based solely on fishery mortality and serious injury, they are however relevant to whether the fishery poses a risk to the particular marine mammal stocks and thus are considered under PI 2.3.2 SIb where the effectiveness of management strategy is evaluated.</p> <p>Studies indicate a deterioration in population health trends for right whales which coincide with decline in calving (Rolland et al. 2016) and it has been suggested that chronic entanglement events may impact energy expenditure and reproductive success of right whales (Van der Hoop et al. 2017). There is also evidence that other co-occurring intrinsic and extrinsic factors may be limiting right whale recovery, including climate change and prey availability (Meyer-Gutbrod et al. 2015; Grieve et al. 2017 in NMFS 2017a), acoustic disturbance and genetic factors. Distinguishing between the effects of sub-lethal entanglement events and other effects is difficult. The effects of sublethal effects on reproductive health would be reflected on population trends and estimates, which are being used to calculate the PBR. Moreover, scarring rates is one of the indicators employed in the monitoring strategy for the ALWTRP. Despite these efforts the incorporation of sublethal entanglement effects are not clearly incorporated into regulations.</p> <p>The measures in place (gear modifications, area closures, gear marking) are in theory expected to work. There are experiences of other fisheries with large whales that have been successful; the gear modifications in Australia's West Coast Rock Lobster Fishery are believed to have successfully reduced whale entanglements, there are also cases on successful entanglement response networks in Mexico and South Africa (Laverick et al., 2017). The SG60 is met.</p> <p>Based on the information directly on the performance and effectiveness of the ALWTRP the team concludes that there is not an objective basis for confidence that the ALWTRP strategy will work to reduce entanglements of right whale in the gillnet fishery, thus the SG80 is not met for the gillnet UoA.</p>
<b>Condition</b>	<p><b>2-3.</b> By the fourth surveillance the fishery shall present evidence to demonstrate there is an objective basis for confidence that the Atlantic Large Whale Take Reduction Plan strategy will work, based on information directly about the gillnet fishery and/or North Atlantic right whales.</p>
<b>Milestones and Client Action Plan</b>	<p>See Table 16</p>

**Table 15. Condition 2-4 (Gillnet)**

<b>PI 2.3.3</b>	<p><b>PI 2.3.3 SI a. at SG80: Sufficient information is available to allow fishery related mortality and the impact of fishing to be quantitatively estimated for ETP species.</b></p> <p><b>PI 2.3.3 SI c at SG80: Information is sufficient to measure trends and support a full strategy to manage impacts on ETP species.</b></p>
<b>Score</b>	75
<b>Rationale (PI 2.3.3)</b>	<p><i>Summary for PI 2.3.3 SIa Large Whales Scoring Element (Gillnet)</i></p> <p>Atlantic right whale entanglement occurrences are rarely observed during fishing operations. Consequently, there are difficulties in attributing mortalities to specific fisheries. Recorded entanglement incidents are considered a minimum, since not all entangled whales are discovered or reported. Entangled animals are usually not found in the same location where it was initially entangled, making it at times impossible to identify the gear type and area where the entanglement occurred. In most of the cases, no gear was documented or recovered, or the whale was carrying sections (line or rope) of unknown/undetermined gear type. Though the majority of mortalities for right whales has no identified gear type, there is evidence that right whales are susceptible to entanglement in gear employed by gillnet fisheries (See PI 2.3.1 SIa). Because available information is not sufficient to allow the gillnet fishery- related mortality and the impact of fishing to be quantitatively estimated for Atlantic right whales the SG80 is not met.</p> <p><i>Summary for PI 2.3.3 SIc Large Whales Scoring Element (Gillnet)</i></p> <p>The limited information on the specific fisheries/gear type on mortalities of Atlantic right whales (See SIa of this PI), impedes the development of reduction measures that effectively target the appropriate fishing areas/gear types/fisheries. Given the susceptibility of Atlantic right whales to gillnet fisheries, the available information is not considered sufficient to support a full strategy to manage the impacts of this fishery on this stock.</p>
<b>Condition</b>	<b>2-3.</b> By the fourth annual surveillance the fishery shall provide evidence that (A) sufficient information is available to allow fishery related mortality to be quantitatively estimated for Atlantic right whales AND (B) information is sufficient to support a full strategy to manage impacts on Atlantic right whales.
<b>Milestones and Client Action Plan</b>	See Table 16



**Table 16. Milestones and Client Action Plan for Conditions 2-2, 2-3 and 2-4**

<p><b>Milestones</b></p>	<p><b>Year 1 Surveillance (2019).</b> (<i>Condition 2-3 PI 2.3.3 and Condition 2-2 PI 2.3.1</i>) The fishery shall present evidence of efforts to continue complying with existing regulations to protect Atlantic right whales, including gear marking and weak links. Additionally, the fishery shall present evidence of supporting federal management agency actions to improve data collection aimed at enhancing information on Atlantic right whale's mortality estimates and management measures.</p> <p><b>Year 2 Surveillance (2020)</b> (<i>Condition 2-3 PI 2.3.3 and Condition 2-2 PI 2.3.1</i>). The fishery shall present evidence of continued compliance with existing regulations to protect Atlantic right whales (gear markings, weak links). Additionally, the fishery shall present evidence of continued support of federal management agency actions to improve data collection aimed at enhancing information on Atlantic right whale's mortality estimates and management measures.</p> <p><b>Year 3 Surveillance (2021).</b> (<i>Condition 2-3 PI 2.3.3</i>). The fishery shall present evidence of continued support of federal management agency actions to improve data collection aimed at enhancing information on Atlantic right whale's mortality estimates and management measures.</p> <p><b>Year 4 Surveillance (2022).</b> (<i>Condition 2-3 PI 2.3.3</i>) The fishery shall present evidence that there is sufficient information collected to allow the Northeast sink gillnet fishery related mortality to be quantitatively estimated for Atlantic right whales (if any) and to support a full strategy to manage impacts of the Northeast sink gillnet fishery, if necessary.</p> <p>(<i>Condition 2-2 PI 2.2.3</i>) The fishery shall present evidence to demonstrate there is an objective basis for confidence that the Atlantic Large Whale Take Reduction Plan strategy will work, based on information directly about the Northeast sink gillnet fishery and/or North Atlantic right whales.</p>
<p><b>Client action plan</b></p>	<p>At the first annual audit, the clients will present evidence of efforts to improve compliance of the of the Northeast sink gillnet fishery with existing regulations to protect Atlantic right whales, including gear marking and weak links. Additionally, the fishery shall present evidence of supporting federal management agency actions to improve data collection aimed at enhancing information on Atlantic right whale's mortality estimates and management measures.</p> <p>At the second annual audit, the clients will present evidence of improved compliance of the Northeast sink gillnet fishery with existing regulations to protect Atlantic right whales (gear markings, weak links). Additionally, the fishery shall present evidence of continued support of federal management agency actions to improve data collection aimed at enhancing information on Atlantic right whale's mortality estimates and management measures.</p> <p>At the third annual audit, the clients will present evidence of continued support of</p>

	<p>federal management agency actions to improve data collection aimed at enhancing information on Atlantic right whale's mortality estimates and management measures.</p> <p>At the fourth annual audit, the clients will present evidence that there is sufficient information collected to allow Northeast sink gillnet fishery related mortality to be quantitatively estimated for Atlantic right whales (if any) and to support a full strategy to manage impacts; AND to demonstrate there is an objective basis for confidence that the Atlantic Large Whale Take Reduction Plan strategy will work, based on information directly about the Northeast sink gillnet fishery and/or North Atlantic right whales.</p>
--	--

<b>1.2.3.Sia</b>	<b>Winter skate information and monitoring SG 80</b> <b>Sufficient relevant information related to stock structure, stock productivity, fleet composition and other data is available to support the harvest strategy.</b>
<b>Score</b>	75
<b>Rationale</b>	The range of information available for assessments and harvest strategy support for Winter skate is limited primarily to survey indices of abundance and limited size data. For those reasons the skate complex status was address by the Data Poor Working Group in 2008. Their conclusions were that status determination would have to depend on Bmsy proxies from surveys. That situation has not changed. The use of those survey indices as the basis for decision rules has largely been successful. Thus, some relevant information related to stock structure, stock productivity and fleet composition is available to support the harvest strategy (SG 60 met). But this information base is not sufficient to support the harvest strategy There is little information on potential stock productivity that can be directly related the amount of catch that might be allowed. While the catch decision rules appear to have been effective, they are not directly related to the assessment and index monitoring (SG 80 not met)
<b>Condition</b>	<b>1-1</b> By the fourth surveillance for the winter skate UoAs (in 2022), the fishery shall provide evidence that sufficient relevant information related to stock structure, stock productivity, fleet composition and other data for winter skate is available to support the harvest strategy.
<b>Milestones</b>	<p><b>Year 1 Surveillance (2019).</b> (<i>Condition 1-1 PI 1.2.3</i>) The fishery shall present evidence of efforts to improve the information related to stock productivity and other data for winter skate which is available to support the harvest strategy. Also, the fishery shall provide a schedule of those efforts planned for years 2-4.</p> <p><b>Year 2 Surveillance (2020)</b> (<i>Condition 1-1 PI 1.2.3</i>) The fishery shall present evidence of efforts to improve the information related to stock productivity and other data for winter skate which is available to support the harvest strategy. Also, the fishery shall report on the progress to improve the information relative to the schedule established in Surveillance Year 1 and to modify that schedule as appropriate.</p> <p><b>Year 3 Surveillance (2021).</b> (<i>Condition 1-1 PI 1.2.3</i>) The fishery shall present evidence of efforts to improve the information related to stock productivity and other data for winter skate which is available to support the harvest strategy. Also, the fishery shall report on the progress to improve the information relative to the schedule established in Surveillance Year 1 and to modify that schedule as appropriate</p> <p><b>Year 4 Surveillance (2022).</b> (<i>Condition 1-1 PI 1.2.3</i>) The fishery shall present evidence of the improvements in the information related to stock productivity and</p>

	other data for winter skate which is available to support the harvest strategy.
<b>Client Action Plan</b>	<ol style="list-style-type: none"> <li>1. The SFA will continue, through its participation in the NEFMC, to promote efforts to improve the information related to stock structure, stock productivity, fleet composition and other data for winter skate that is available to support the harvest strategy in the event the NEFMC determines that the skate FMP is not in compliance with applicable federal laws and regulations.</li> <li>2. The SFA will continue to work with the NEFMC and will report on ongoing efforts to promote improvements to the information related to stock productivity and other data for winter skate which is available to support the harvest strategy in the event the NEFMC determines that the skate FMP is not in compliance with applicable federal laws and regulations.</li> <li>3. The SFA will continue to work with the NEFMC and will report on ongoing efforts to promote improvements to the information related to stock structure, stock productivity, fleet composition and other data for winter skate that is available to support the harvest strategy in the event the NEFMC determines that the skate FMP is not in compliance with applicable federal laws and regulations.</li> <li>4. The SFA will continue to work with the NEFMC and will report on the status of ongoing efforts to promote improvements to the information related to stock structure, stock productivity, fleet composition and other data for winter skate that is available to support the harvest strategy such that this information is sufficient to meet the 80 scoring guidepost for this Performance Indicator by the fourth surveillance audit in 2022.</li> </ol>
<b>Consultation on Condition</b>	SFA will continue to work through the NEFMC process with relevant scientists and managers toward achievement of this condition.

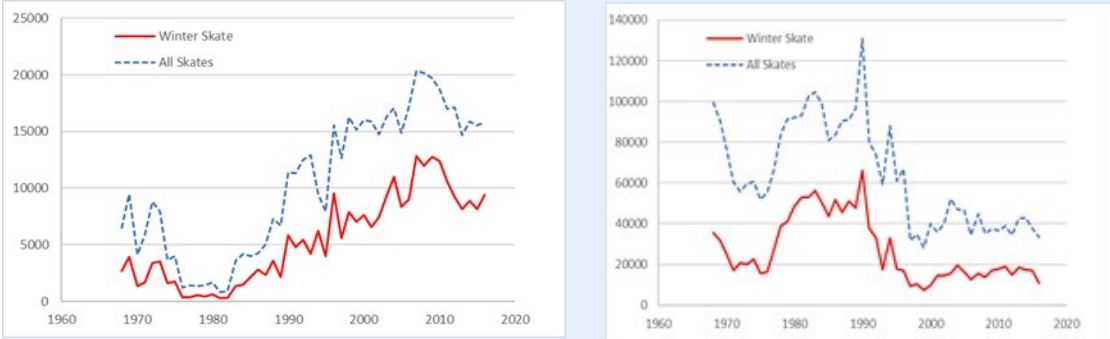
<b>1.2.4 Slc</b>	<b>Winter skate assessment of stock status SG80 The assessment takes uncertainty into account</b>
<b>Score</b>	75

<b>Rationale</b>	<p>The status monitoring process (assessment) relies on the biomass index, whereby certain levels of that index that have occurred in the past have been used to define overfishing and overfished criteria (sec 3.3.2). It is clear in this assessment what the limitations of this approach are, and the uncertainties occur when using these methods. Thus, SG 60 is met.</p> <p>However, the assessment does not take into account most if not all of the uncertainties. The pragmatic specifications of overfishing and overfished levels were chosen appropriately. But 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 (2009). 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 (SG 80 not met)</p>
<b>Condition</b>	<b>1-2</b> By the fourth surveillance for the winter skate UoAs (in 2022), The assessment of winter skate stock status shall take uncertainty into account.
<b>Milestones</b>	<p><b>Year 1 Surveillance (2019).</b> (<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><b>Year 2 Surveillance (2020)</b> (<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><b>Year 3 Surveillance (2021).</b> (<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><b>Year 4 Surveillance (2022).</b> (<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>
<b>Client Action Plan</b>	<ol style="list-style-type: none"> <li>1. Given that the skate FMP is required by federal law to take uncertainty into account, the SFA will continue, through its participation in the NEFMC, to promote efforts to address uncertainty in the assessment, to the extent that such efforts do not conflict with applicable federal laws and regulations, and will report on said efforts in the event the NEFMC determines that the skate FMP is not in compliance with applicable federal laws and regulations.</li> <li>2. Given that the skate FMP is required by federal law to take uncertainty into account, the SFA will continue to work with the NEFMC, to promote efforts to address uncertainty in the assessment, to the extent that such efforts do not conflict with applicable federal laws and regulations, and will report on said efforts in the event the NEFMC determines that the skate FMP is not in compliance with applicable federal laws and regulations.</li> <li>3. Given that the skate FMP is required by federal law to take uncertainty into</li> </ol>

	<p>account, the SFA will continue to work with the NEFMC, to promote efforts to address uncertainty in the assessment, to the extent that such efforts do not conflict with applicable federal laws and regulations, and will report on said efforts in the event the NEFMC determines that the skate FMP is not in compliance with applicable federal laws and regulations.</p> <p>4. Given that the skate FMP is required by federal law to take uncertainty into account, the SFA will continue to work with the NEFMC, to promote efforts to address uncertainty in the assessment, to ensure that uncertainty is taken into account sufficiently to meet the 80 SG for this Performance Indicator by 2023.</p>
<b>Consultation on Condition</b>	SFA will continue to work through the NEFMC process with relevant scientists and managers toward achievement of this condition.

## Appendix 2 Peer Review Reports – Peer Reviewer A

### General Comments:

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?	No	Most of the scoring looks ok, but some issues should have scoring reduced. In particular, the problems stem with the HCR which is based on the complex rather than the stock, and the interpretation of the biomass index for stock status.	<p>First, as noted in the figure below (which is in the report) the winter skate is the dominate proportion of the skate landings. More importantly, winter skate have exhibited a relatively stable proportion of the landings and discards over the last 15 years or so, implementation of management has not appeared to have been affected. The assumption of the HS/HCR was that management alterations of TAC for the complex are reflective of the dynamics of the catch of winter skate. The record, thus far, shows this has been effective. However, this is not to say that this could not change in the future. Any HS/HCR for any fish stock could fail in the future due to unforeseen circumstances. But it appears that the FMP and the HS/HCR definition have built in some mitigation safeguards.</p> 

Are the condition(s) raised appropriately written to achieve the SG80 outcome within the specified timeframe? [Reference: FCP v2.1, 7.18.1 and sub-clauses]	Yes	Conditions should increase the scores as constructed. Other conditions for other scores will need to be formulated if score reductions are agreed to.	Winter Skate and All Skates combined landings in mt (left) and discards in numbers (right)
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)	N/A	<p>There are a number of sticking points with this assessment. In particular, the HCR is based on a complex rather than a stock, while the assessment and harvest strategy follows the stock. Additionally, there are issues with scoring stock status given the biomass index, the length of time the stock has not been overfished, and the length of time the stock as not been experiencing overfishing.</p> <p>Note there are a large number of spelling mistakes and typos in the document.</p>	<p>The following is taken from the Report: The skate are managed as a complex with Allowable Biological Catch (ABC) and Annual Catch Limit (ACL) specifications 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. For skates, the Council set the ACL to be equal to the ABC. Total Allowable Landings 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 7% of the total landings. (NEFMC 2017, NEFSC 2017). The ACL is adjusted by a 25% buffer to get the Annual Catch Target (ACT). Then 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 2018). We believe that this process, that imposes a 25% buffer, that evaluates the proportion of discards when making catch limit decisions and that adjusts the catches proportional to changes in the abundance index is sufficient to fulfill the requirement for the HS/HCR to be “responsive to the status of the stock.” Could it fail in the future? Perhaps, but the effectiveness over the last 8-9 years since implementation suggest that it is currently “working” and that is unlikely to fail within the certification period. Nevertheless, we believe the process should be revisited which is why we suggested Conditions for 1.2.3 and 1.2.4 during the certification period to address this issue.</p> <p>The typos and spelling errors were fixed.</p>



**PI Comments:**

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
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>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

1.1.1	Yes	No (non-material score reduction expected)	NA	<p>SlA to reach a score of 100, the probability of the stock being above the limit is 95%. Given the uncertainty in the trawl survey 3-year average and that it is only at the target biomass “a high degree of certainty (95%) was not justified. While it can be argued that it reaches the “highly likely level (80%)” given that the 3-year index is above the 75% percentile, a rating of 100 is too high. 80 level is ok</p>	<p>The standard for SG100 is “There is a high degree of certainty that the stock is above the point where recruitment would be impaired” where the recruitment limit that was chosen is based on the index shown in the top panel of Skate Complex Biomass Indices (Figure 1. Below). The index covers a span of about 50 years. The limit was exceeded a few times in the early years but has not been exceeded in the last 25 years or so, longer than the likely span of winter skate. Also, the stock has recovered from the periods during which the index was near the limit, indicating that the limit that was specified did not result in long term impairment of recruitment. This supports the selection that the scientists made for the definition of the limit. And given that limit, the history of the index over 50 years provides considerable support that the current index is above the limit. These two points suggest that it is “highly likely” that the current biomass is above the level where recruitment would be impaired.</p>	Not Accepted (no score change)
-------	-----	--	----	--	--	--------------------------------

1.1.1	Yes	No (non-material score reduction expected)	NA	<p>Slb Stock appears to have only been fluctuation around the target since 2008, less than the generation time of 17-22 years. Further stock was "overfishing" in 2013-2014. A score of 80 is ok.</p>	<p>The standard for SG 100 states "there is a high degree of certainty that the stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years". As the reviewer indicated, the stock has been fluctuating around the target for about a decade. This coincides with the period where the FMP was imposed. The review mentions "overfishing" in 2013 and 2014. This comment was not the definition of overfishing in the FMP and harvest strategy. The stock was not undergoing overfishing based on the FMP definition. We believe that the reviewer's remark is a reference to the fact that the index was below the target in those years, so in that sense the target was not being reached. But that is an example of "fluctuating around." Likely generation times were mentioned by the reviewer, but that issue does not enter into the argument for fluctuating around the target. We note that there was a period early in the series when there was no management where the index fluctuated around and above the target for about 15 years. Given the target that was specified, it is highly likely that the stock is fluctuating around the target.</p>	
-------	-----	--	----	---	--	--

1.1.2	Yes	No (material score reduction expected to <80)	NA	SlA: Reference points are based on biomass caught in the trawl survey, not on either exploitable or mature biomass. A score of 60 is more appropriate.	The SG 80 criterion is “Reference points are appropriate for the stock and can be estimated.” Because the reference points are based on a biomass survey, the reviewer is effectively saying that index-based reference points are not appropriate. We do not agree. There are many well managed stocks around the world where a survey index is the basis of reference points and management. In this fishery (as with most fishery monitoring), a survey index has been designed such that it is expected to be proportional to winter skate abundance. Thus, the fluctuations and trends in that index are interpreted as fluctuations and trends in biomass. The history of exploitation and the history of the observed index has provided a relative basis for defining reference points, which are consistent and appropriate with the data and can be estimated.	Not Accepted (no score change)
1.1.2	Yes	Yes	NA	Slb: Scoring agreed		
1.1.2	Yes	Yes	NA	Slc: Scoring agreed		
1.1.3	Yes	Yes	NA	Scoring agreed		

1.2.1	Yes	No (material score reduction expected to <80)	NA	SlA: HCR is not responsive to the state of the stock as only an overall ACL for the skate complex is set. rather than by individual species. While understandable given the difficulties in the past with ID, it can lead to the WS stock becoming depleted without a reduction in fishing mortality from the HCR if the over stocks increase biomass. Further there is a mismatch between the reference points based on stock, and HCR based on complex. Score 60	The SG 60, 80, 100 criteria are: SG 60 The harvest strategy is expected to achieve stock management objectives reflected in the target and limit reference points; SG 80 The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving management objectives reflected in the target and limit reference points. SG 100 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. We believe the harvest strategy is responsive to the status of the stock for the reasons given in more detail in our response to General Comments and, thus, fulfill SG 100.	Not Accepted (no score change)
1.2.1	Yes	Yes	NA	Slb: Scoring agreed		
1.2.1	Yes	Yes	NA	Slc: Scoring agreed		
1.2.1	Yes	Yes	NA	Sid: Scoring agreed		

1.2.2	Yes	No (material score reduction expected to <80)	NA	<p>SlA: Because the HCR is based on the complex, rather than the stock, it cannot ensure that exploitation is reduced at low stock sizes. Additional the relatively high level of discarding suggests that lower landings would only increase discards rather than lowering catch. Also the harvest strategy put forth by the federal plan is stock based, while the HCR is complex based. Score 60</p>	<p>First, as noted in Figure 2 below, which is also in the report, the winter skate is the dominate proportion of the skate landings. More importantly, winter skate have exhibited a relatively stable proportion of the landings and discards over the last 15 years or so, implementation of management has not appeared to have been affected. The assumption of the HS/HCR was that management alterations of TAC for the complex are reflective of the dynamics of the catch of winter skate. The record, thus far, shows this has been effective. However, this is not to say that this could not change in the future. Any HS/HCR for any fish stock could fail in the future due to unforeseen circumstances. But it appears that the FMP and the HS/HCR definition have built in some mitigation safeguards. The following is taken from the Report: <i>The skate are managed as a complex with Allowable Biological Catch (ABC) and Annual Catch Limit (ACL) specifications 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. For skates, the Council set the ACL to be equal to the ABC. Total Allowable Landings TALs are set according to procedures that</i></p>	Not Accepted (no score change)
-------	-----	---	----	---	--	--------------------------------

					<p>assume that future discards would be equivalent to the average rate from the most recent three years; state landings would approximate to 7% of the total landings. (NEFMC 2017, NEFSC 2017). The ACL is adjusted by a 25% buffer to get the Annual Catch Target (ACT). Then 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 2018). We believe that this process, that imposes a 25% buffer, evaluates the proportion of discards when making catch limit decisions and that adjusts the catches proportional to changes in the abundance index, is sufficient to fulfill the requirement for the HS/HCR to be “responsive to the status of the stock.” Could it fail in the future? Perhaps, but the effectiveness over the last 8-9 years since implementation suggest that it is currently “working” and that is unlikely to fail within the certification period. Nevertheless, we believe the process should be revisited which is why we suggested Conditions for 1.2.3 and 1.2.4 during the certification period to address this issue. SG 80 Well defined harvest control rules are in place that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as</p>
--	--	--	--	--	---

					limit reference points are approached.	
1.2.2	Yes	Yes	NA	Slb: Scoring agreed		



1.2.2	Yes	Yes	NA	Slc: Scoring agreed		
1.2.3	Yes	Yes	Yes	Sla: Scoring agreed		
1.2.3	Yes	Yes	Yes	Slb: Grudgingly agreed. Stock assessment and monitoring are not in line with each other. Assessment and advice follows the stock, while the quotas, monitoring, and HCR follow the complex. It does however support the HCR. A better explanation of observer coverage would add to the rational		
1.2.3	Yes	Yes	Yes	Slc: Scoring agreed		
1.2.4	Yes	Yes	Yes	Sla-e: Scoring agreed. Also agree with condition		
2.1.1	Yes	Yes	NA	Sla-d: Scoring agreed		
3.2.1	Yes	Yes	NA	Sla: Scoring agreed		
3.2.2	Yes	Yes	NA	Sla-e: Scoring agreed		

3.2.3	Yes	Yes	NA	Sla-d: Scoring agreed		
3.2.4	Yes	Yes	NA	Scoring agreed		

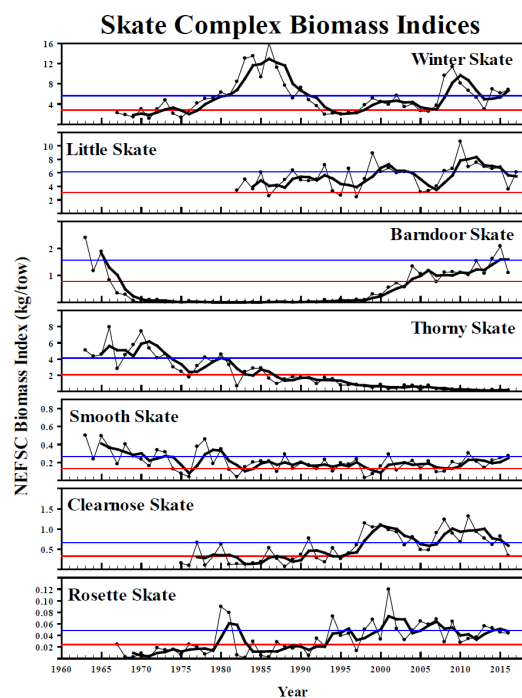


Figure 1. justification of 1.1.1

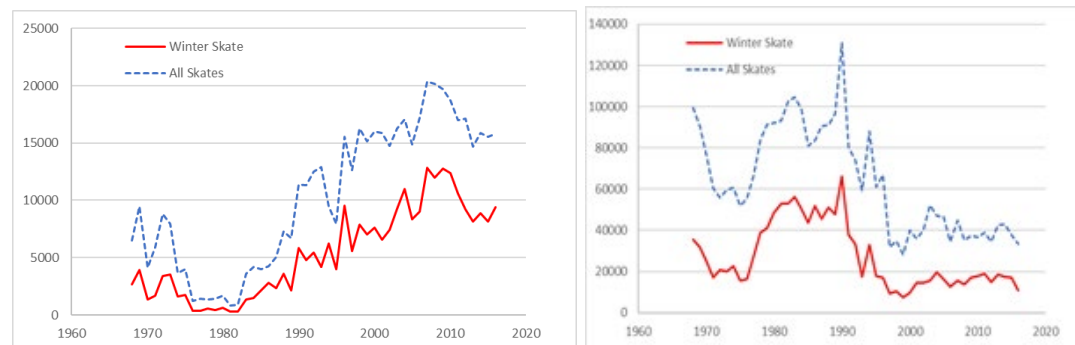


Figure 2. Justification for 1.1.2.

## Peer Reviewer Follow-up

1.1.1	Yes	SlA: Agreed, but CAB should show the probability that the three-year average is above the limit reference point. How is being at the 75th percentile of the time series statically different than one-half of the 75th percentile? If qualitative, what other evidence of stock status supports at SG100? See CB2.2.1.3	Figure shows the three-year running average as well as the annual data points. All the data points since about 1997 are above the LRP. Additionally, recruitment events were observed to be at relatively high during this period. The original 75%tile was chosen based on the history of fishing and the history of the index. While a lower percentile might be justified, the 75th was based on the history and has not been rejected by ensuing dynamics of the stock.	Accepted (no score change)
1.1.1	No (non-material score reduction expected)	Slb: Not agreed. See CB2.2.2 1 and 2. Stock is at/above target currently (SG 80 met). Stock has been fluctuation around target for less than a generation (SG 100 is not). Note here and throughout Winter skate uses the Autumn index, not the Spring (See NEFSC 2017 table 1).	CB2.2.2 2 requires that the stock be fluctuating around its target for longer periods than the “last few years”. The stock has been fluctuation around the target for more than 10 years. The reviewer is correct that Winter skate uses the Autumn index, not the Spring (See NEFSC 2017 table 1).	Not Accepted (no score change)
1.1.2	Yes	SlA and Slb: Agreed. Is there a typo in Slb “ <i>the target is the mean of a recent period and the limit is the 75th percentile around the mean</i> ”? From earlier in the document “ <i>Overfished definition for both Little and Winter skate is 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 (NEFMC 2017, NEFSC 2017).</i> ”? Also as above it is the Autumn survey	The reviewer is correct that the correct quote should be “Overfished definition for both Little and Winter skate is 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 (NEFMC 2017, NEFSC 2017).”? Also, as above the reviewer is correct that it should be the Autumn survey. These changes have been made in the text.	Accepted (no score change)

1.2.1	No (material score reduction expected to <80)	<p>SlA: Not agreed. The HS is on the complex rather than the stock. While Winter skate is the bulk of the landings for the complex, the Winter skate index is only 45% of the overall skate complex index (2014-2017) and the ABC is derived by “<i>The skate are managed as a complex with ABC and ACL specifications 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 other managed skate species</i>”. The ACL/ACTs, therefore, are set on the complex rather than on a stock by stock basis from a combined index and exploitation rate. While the HS maybe responsive to the state of the complex, it is not responsive to the state of the stocks in that complex; even if landings of Winter skate from the complex are, as a percentage, consistent.</p>	<p>The reviewer notes the difficulty with managing as a complex in that the dynamics of stocks within the complex may mask the status of an individual stock. In the case of winter skate and the skate complex, it can be argued that the complex was designed to approximately follow the dynamics of winter skate with less precise monitoring of the other stocks. While the reviewer notes that winter skate are 45% of the spring and autumn surveys, the winter skate are the predominate species in the Autumn survey about 70% (NEFMC 2017, NEFSC 2017) and it is also consistently is about 2/3 of the landings and 45% of the discards. Therefore, the harvest strategy is designed to be responsive to the state of the stock and is designed to achieve stock management objectives reflected in the target and limit reference points.</p>	Not Accepted (no score change)
1.2.2	No (material score reduction expected to <80)	<p>SlA: Not agreed. The CAB should show how a change in stock status of Winter skate to overfished/overfishing occurring translates into reduced complex ACL/ACTs, and then how the reduced ACL/ACT translates into a reduction in the Winter Skate harvest. This was not clear in the document.</p>	<p>The reviewer’s concerns with the HCR are not so much that it will not be effective in maintaining the harvest strategy, but rather that it might not be responsive enough if overfishing/overfished criteria are exceeded. The HCR adjusts the target catch proportional to the change in the three-year average of the combined fall survey. This rule is essentially attempting the maintain the fishing mortality rate at the specified Fmsy surrogate. If the overall index decreased 50%, then the rule would essentially reduce fishing mortality rate by 50%. This rule is consistent with many HCRs where F decreases toward the origin when biomass declines below some limit.</p> <p>The question is how effective the rule will be in an overfished/overfishing condition for winter skate. The HCR for the complex reduces the fishing mortality rate as soon as a decline in the survey is detected. Winter skate are the predominate portion of the autumn survey, so it is more likely that if other stocks</p>	Not Accepted (no score change)

		<p>decline, then the effect of the rule on winter skate will be more precautionary. On the other hand, if the other stocks increase, the rule might indicate some increase in winter skate TAC might not have otherwise been warranted. But the 25% buffer and the discarding rules mitigate this possibility.</p> <p>We reiterate our believe that this process, that imposes a 25% buffer, that evaluates the proportion of discards when making catch limit decisions and that adjusts the catches proportional to changes in the abundance index is sufficient to fulfill the requirement for the HS/HCR to be “responsive to the status of the stock.” Could it fail in the future? Perhaps, but the effectiveness over the last 8-9 years since implementation suggest that it is currently “working” and that is unlikely to fail within the certification period. Nevertheless, we believe the process should be revisited which is why we suggested Conditions for 1.2.3 and 1.2.4 during the certification period to address this issue.</p>	
--	--	--	--

(PCDR AND ALL SUBSEQUENT REPORTS)

## **Appendix 3 Stakeholder submissions**

MSC Technical Oversight Comments:

SubID	PageReference	Grade	RequirementVersion	OversightDescription	Pi	CABComment
29253	43	Major	FCR-7.10.6.2 v2.0	PI 1.1.2 Sia.The rationale should support why the scoring guidepost is met for this scoring issue. It is noted that the target is the mean of a recent period. It is not clear what this period is or how it is determined. Additionally, how it is determined to be appropriate for the stock and how CB2.3.3 is considered is not evident. Further information on the conclusions from the Data Poor Workshop would help in this regard.	1.1.2,	<p>The selected reference time series currently encompasses the GOM-MA offshore region from 1967-1998. The target biomass reference point for winter skate is the 75th percentile value of the NEFSC autumn biomass index for the GOM-MA offshore region from 1967-1998, and the threshold biomass is one-half of that value (NMFS, FMP). The selected reference time series currently encompasses the GOM-MA offshore region from 1967-1998. The target biomass reference point for winter skate is the 75th percentile value of the NEFSC autumn biomass index for the GOM-MA offshore region from 1967-1998, and the threshold biomass is one-half of that value (NMFS, FMP).</p> <p>This incorporates data from the longest and most geographically comprehensive time series of survey data available for winter skate. The autumn trawl survey dates back to 1963, but the Mid-Atlantic region was not included until 1967. Effectively, the Bmsy surrogate implied was 25% higher than the mean that was observed at that time and the limit was at the low observation at that time (and also subsequently has remained the low observation). Given the Bmsy surrogate (which might be an underestimate of sustainable productivity), then specifying the limit as ½ of that is consistent with CB2.3.3.3.3 and CB2.3.3.4. Additionally, the history of recruitment subsequent to the implementation of the FMP supports that the limit is appropriate.</p>

29258	P3, P8	Minor	FCR-7.4.7 v2.0	<p>Page 3 Part 1 and Page 8 Part 3.1.1 Please explain and clarify why Monkfish in this report remain in assessment but are not a subject of this report, whether the final UOA includes Monkfish needs to be very clear. Although it mentioned the Certification Version changes and CAB changes, it is still not clear to readers whether the Monkfish is included in the UOA. And if Monkfish remains in, what are the effects on the UOA?</p>	<p>This has been clarified throughout the report. Monkfish remains in assessment, but also is included as P2 species in the present report. When the final UoCs are included in the PCR, they will only include the Winter skate UoCs.</p>
-------	--------	-------	----------------	--	--



29259	P33	Minor	FCR-7.4.11.a v2.0	<p>Page 33 Part 5.2 Table 4 As described, the handline(&lt;5%) gear can be distinguished by VTR on the buyer side. However, what are the physical segregation and labelling measures at sea, or before and after landing. What prevents the handline product be mixed with certified product on board, during transportation, and during labelling and storage?</p>	<p>The reference to the handline gear was an error in carrying over this information from the spiny dogfish report. There is no catch of winter skate using handline and this reference has been removed from the table.</p>
-------	-----	-------	-------------------	---	--

29260	P34&35	Minor	FCR-7.12.1.5 v2.0	Page 34 &35 Please clarify if the dealers are included in the fishery certificate, and if they require CoC?	The language in this section clearly indicates that dealers are included in the fishery certificate and do not require CoC.
-------	--------	-------	-------------------	---	---

29261	4,5,9,35	Guidance	FCR-7.4.8 v2.0	<p>1) On page 4/5 Bottom Trawl Winter Skate is listed as remaining under assessment, not being covered under the current scope extension. However, on page 9 and 35 it is referred to as part of the proposed UoC. Please clarify which gear types remain under assessment and provide consistent information throughout the report.</p> <p>2) Also, on page 35 "Only product sourced from vessels with state or federal permits to catch spiny dogfish employing the following gear types: may enter Chain of Custody". Is this a typo for spiny dogfish?</p>	Thank you for noticing this error. It has now been fixed—all Winter skate units are the subject of this report and the table has been moved accordingly.
-------	----------	----------	----------------	--	--

29271	60	Major	FCR-7.10.6.1 v2.0	PI 3.2.2 SI b. It is not clear from the rationale that decision making processes respond to all issues identified.	3.2.2,	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 make adjustments to the regulatory framework implemented in the FMP on a regular basis. However because the SAFE Report, which supplements and updates (where possible) the information contained in the FMP is out of date, it is not clear that the decision making process responds to all issues identified. The score was reduced to an 80 for this scoring issue.
-------	----	-------	-------------------	--	--------	--

29272	62	Major	FCR-7.10.6.1 v2.0	PI 3.2.3 SI a. It is not clear from the rationale what evidence has been presented to confirm that the MCS system has demonstrated an ability to enforce relevant management measures / strategies and/or rules.	3.2.3,	Although no existing documents demonstrated the ability of the monitoring, control and surveillance system to enforce relevant management measures, no evidence of non-compliance within this fishery was found in the OLE Press Release, or in the OLE Enforcement Annual Report Fiscal Year 2017. Anecdotal information and the expert opinion of OLE law enforcement officers indicate that the fishers comply with the management system under assessment and provide information of importance to the effective management of the fishery.
-------	----	-------	-------------------	--	--------	---

29281	44	Major	CB2.3.2.2 v1.3	<p>PI 1.1.2 Sic. The rationale does not provide evidence that the current target is consistent with Bmsy or similar intent. If SG80 is met, evidence of consistency with Bmsy or similar intent needs to be explained further. Reference to Figure 3.3.5 supports status but it is not explained at a level that is consistent with what is sought in the guidepost. Further information is covered in CR clauses CB2.3.2.2, CB2.3.2.4, and CB2.3.9.2b.</p>	1.1.2,	<p>As noted in the response above for 1.1.1 Sia The selected reference time series currently encompasses the GOM-MA offshore region from 1967-1998. The target biomass reference point for winter skate is the 75th percentile value of the NEFSC autumn biomass index for the GOM-MA offshore region from 1967-1998, and the threshold biomass is one-half of that value (NMFS, FMP).</p> <p>This incorporates data from the longest and most geographically comprehensive time series of survey data available for winter skate. The autumn trawl survey dates back to 1963, but the Mid-Atlantic region was not included until 1967. Effectively, the Bmsy surrogate implied was 25% higher than the mean that was observed at that time and the limit was at the low observation at that time (and also subsequently has remained the low observation). This Bmsy surrogate (which might be an underestimate of sustainable productivity) was above the mean at that time. The stock has subsequently improved such that it has fluctuated around the target for the last decade or so. Thus, it is highly likely to be near or above Bmsy. consistent with CB2.3.2.2, CB2.3.2.4, and CB2.3.9.2b.</p>
-------	----	-------	----------------	---	--------	---

Amanda Stern-Pirlot  
MRAG Americas, Inc.

8950 Martin Luther King Jr. Street N. #202 St.  
Petersburg, FL 33702  
certification@mragamericas.com

April 26, 2019

## **6 RE: U.S. Atlantic Winter Skate Scope Extension to the U.S. Atlantic Spiny Dogfish Fishery Marine Stewardship Council Certification Public Comment Draft Report**

Dear Ms. Stern-Pirlot,

Thank you for accepting our stakeholder comments on this assessment report to extend certification of the US Atlantic spiny dogfish fishery to include winter skate in its scope of certified species. To our knowledge, this would be the first skate species to be certified under MSC. It is, therefore, important that the scoring and rationale used are robust and the precedent set is a high standard for certification of such inherently vulnerable species.

As a member of the subclass Elasmobranchii, winter skates possess life history characteristics that make them especially vulnerable to exploitation and leave them with little capacity to recover from heavy fishing pressures. Many of these life histories relate directly to the winter skate's ability to rebuild populations in the face of commercial harvesting. These characteristics include late maturation of adults, long generation time, and low reproductive potential, which all translate to slow population growth in general. Considering their life history, winter skate management needs to be approached through a precautionary lens, especially given our limited understanding of current stock health.

We are concerned about the uncertainty and gaps in data for this species that has been accepted for the certification. The information which informed the assessment for winter skate is now a decade old and is based on data poor frameworks. As such, definitions and reference points determined from this information may not reflect winter skate stocks in their current state. We do not think the uncertainties are properly accounted for in the current assessment and the management framework should be more precautionary.

Further taxonomic confusion also presents challenges for how well we understand winter skate stock and health, as there are few ways of differentiating winter skate from its cryptic sibling species, little skate, especially at smaller lengths (TL). Considering this overlapping morphology, as well as their overlapping distribution along the Northwest Atlantic, assumptions and estimates for winter skate are subject to inaccuracy when identification is not determined genetically.

There is an assumption that winter skate have recovered and are no longer in a depleted state, however, relying on this assessment, given the data gaps and concern about accurate representation of historic catch and landings that are species specific, warrant precaution. We do not think the information available passes MSC scoring posts.

## 7 Specific Scoring notes

### PI 1.1.2 Reference Points

The reference points used are proxies based on agreed definition of overfishing of winter skate and are subject to significant uncertainty. These reference points are also based on a definition of overfishing for the species that is now a decade old and is in need of updating if it is to accurately reflect the true limit and target reference points appropriate for the species. With the limited data available for winter skate, there is much uncertainty around the health of the stock and whether the stock assessment, which is also now a decade old, represents the actual health of winter skate stocks. For this reason, we do not actually know whether these reference points are appropriate for the species, thus not warranting a PI score of 80 for 1.1.2a. Furthermore, we know winter skate, along with their Elasmobranch relatives, possess life history characteristics that make them especially vulnerable to exploitation and heavy fishing pressures, and these characteristics significantly impact winter skate's capacity to recover from these pressures. As such, winter skate management needs to be approached through a precautionary lens.

Certifying this fishery prematurely undermines incentives to improve the assessment framework and reference points.

### 1.1.2 b and c

Scoring and justification for 1.1.2 b & c are overly optimistic, as justification assumes stocks have recovered to a healthy state. The reference point appropriateness is already called into question given the lack of species specific data in the historic timeline and data poor assessment framework and, as is noted for scoring, does not pass 100 when considered with 'precautionary issues'. As noted above, such inherently vulnerable species should warrant a high level of precaution to pass even the SG 60 level.

### 1.2.1 and 1.2.2 – Harvest Strategy

Justification for giving winter skate a score of 100 in 1.2.1 & 1.2.2 largely hinges on the fact that a buffer of 25% will reduce the Annual Catch Limit, however, the assessment report notes that this buffer will be reduced to 10% in the soon-to-be amended Fisheries Management Plan. So much of what we know about winter skate is assumed using old data which has seen minimal updating. For this reason, a harvest strategy which reduces buffer by over half before we have sufficient time to determine the capacity of this species to recover is inappropriate, and does not warrant a score of SG100, let alone a score of SG80. Furthermore, this reduction also reduces consideration for uncertainties, which was a main criteria for SG80 in 1.2.2b. Overall, justification for scoring is unclear and inconsistent with criteria the fishery was assessed against.

1.2.1 and 1.2.2 were given average scores of SG90 and 80 respectively, and we fear this does not capture the significant threat of overexploitation on winter skate stocks. There is concern for the slow growth and maturation of winter skate relative to the rate at which they are harvested. Winter skate are one of the largest shelf-dwelling skates found the Atlantic, and are targeted largely for their wing meat. Other large skate species found in the Atlantic, including the Barndoor skate (currently prohibited in the US), the Common skate and the White skate, have all experienced significant



decline in population due to skate wing fishing, and these species are listed as 'Endangered', 'Critically Endangered' and 'Endangered' respectively. The Barndoor skate provides an example of the implications of overexploitation when it comes to skates. The species was fished to a point of near extinction in 1998 and was almost the first well-documented extinction event in marine fish species. Extinction was narrowly avoided, and Barndoor skate were prohibited in US fisheries in 2004. Almost 15 years later, Barndoor skate populations are now stable in the Atlantic, however this example helps to illustrate not only how sensitive skates are to exploitation, especially the larger growing ones, but also how long it takes for these populations to recover in the face of heavy fishing pressures.

Skates in general have been identified as ecologically significant to demersal fish communities when considering their abundance and biomass. Trophic position as well as wide distributions make winter skate a key player in maintaining balance within these communities, and these have also suggested that skates could provide valuable insight as indicators of ecological change. For this reason, it is imperative that stocks are not fished to an extent that would compromise the essential role they play in maintaining a healthy demersal ecosystem

Additionally, the CAB report notes that fisheries targeting winter skate in the bait fisheries will target juvenile winter skate. This is a major concern in the harvest strategy. Winter skate become very cryptic in their morphology as juveniles and young adults. The winter skate share almost identical morphology with their sibling species, little skate. Winter skate can primarily be differentiated from little skate at larger sizes, as winter skate have a significantly larger maximum size than little skate.

However, at smaller sizes, below 35cm TL, which encompasses the juveniles bait fisheries would target, it becomes impossible to differentiate between the two species in the field. The only known, fool-proof way to differentiate the two species below 35cm TL is through genetic testing. Therefore, not only could the actual catch of winter skate be skewed as a result, but fisheries could begin to have an unintentional impact on the health of little skate stocks, and these impacts could run the risk of going unnoticed as a result of cryptic morphology at these smaller TL ranges.

#### 1.2.3 a

Before passing the 60 scoring post for winter skate under 1.2.3, the assessment should be updated. The data poor stock workshop took place in 2009 and is not a sufficient substitute for more updated assessment

The extent of data gaps in the understanding of this species is incredibly underestimated in the assessment scoring rationale. Skates are an understudied groups of elasmobranchs in comparison to their charismatic relatives the sharks and rays. The cryptic morphology of winter skate presents another challenge when it comes to assessing the health of stocks, as winter skate share almost identical morphology with a sibling species, the little skate. Currently, there are very few ways of differentiating these species in the field. As a result, accurate ID of these species largely relies on genetic sampling or size comparison, since winter skate grow considerably larger than little skate who reach a much lower maximum TL of approximately 53-59 cm. Issues arise for individuals caught at a length of 30-35 cm for both winter and little skate, as they appear nearly identical in these lower TL ranges. Accurate species identification has remained a major challenge across the Northwest Atlantic Skate Complex, when the misidentification and confusion between four species in this complex, the European Common skate, White skate, Norwegian skate and Longnose skate, which were documented under two taxonomic ID's, led to the critical endangerment of the European Common skate.

#### 1.2.3 b

Justification for SG80 under 1.2.3b requires that stock abundance and removals of the fishery are regularly monitored at a level of accuracy and coverage consistent with harvest strategies, however, we argue that this is not the case with winter skate. Up until 2014, species-specific data was not required to be collected for skates. Relying on this assessment, given the data gaps and concern about accurate representation of historic catch and landings that are species-specific, does not meet the MSC scoring bar. Additionally, the implications of taxonomic confusion and inability to differentiate species

clearly can be severe, and overlapping distribution of winter and little skate along the northwestern Atlantic make accurate identification and data collection a serious concern. This cryptic morphology between the two species means biomass and abundance estimates from surveys where genetic identification did not take place may not capture the true state of the populations from surveys. As a result, although monitoring has taken place in the past, we argue it has not been sufficient enough to capture the true state of winter skate stocks currently, nor to support the harvest control rules put in place. Furthermore, assumptions about winter skate stocks based on abundance surveys need to consider the possible overlap between the morphologically identical little skate.

What is the observer coverage for this fishery and the requirements for reporting winter skate both in log books and in fishery-dependent sampling to ensure species accuracy?

#### 1.2.4 a and c

The perceived health of winter skate stocks is based on an assessment that is now a decade old and was conducted using data-poor workshoping/frameworks. Reporting for winter skate has historically been low, and it should be noted that species-specific data collection was not introduced until 2014, meaning that our understanding of winter skate stocks is even more limited. The NEFSC surveys indicate winter skate has experienced dips below the biomass threshold historically, and when taking into consideration the life history traits for the species, the risk of exploiting the species beyond their capacity is high. Based on the uncertainty and weak nature of the assessment used in determining the health of winter skate stocks in assessing it for certification, as well as considering their history of decline and troublesome life history traits, further consideration needs to be made prior to certifying winter skate as sustainable. Most importantly, our assessment of this species needs to be updated if we are to even begin to make decisions about the best way to manage and harvest winter skate responsibly and sustainably.

As a member of the subclass Elasmobranchii, winter skates possess life history characteristics that make them especially vulnerable to exploitation and leave them with little capacity to recover from heavy fishing pressures. Many of these life histories relate directly to the winter skate's ability to rebuild populations in the face of commercial harvesting. These characteristics include late maturation of adults, long generation time, and low reproductive potential, which all translate to slow population growth in general. Of particular concern is this late maturation in females relative to the maximum age observed, which results in very few spawning episodes in a single individual's life. These characteristics have already proven to play a role in the winter skate's ability to recover from heavy fishing pressures.

The level of assessment the CAB has accepted here, even with a data poor lens, is very low compared with Principle 1 stock assessments across the wide variety of MSC certifications we have been stakeholders in. In comparison to spiny dogfish, the other target species component of this fishery, which received an in-depth assessment in 2018 according to NOAA, the assessment used to score winter skate is way out of date. Not only is it out-dated, but it is also riddled with uncertainties due to the lack of species-specific data collected until recently, as well as the taxonomic confusion that exists between winter skate and little skate. The assessment does not address these uncertainties sufficiently, and as such, proposed management is not precautionary enough to reflect the vast uncertainties that remain in this assessment.

We do not feel a pass of the SG 60 on this PI is justified for this species at the present time.

Thank you for your consideration of our comments. Sincerely



Shannon Arnold

Marine Program, Senior Coordinator  
Ecology Action Centre

Halifax, Canada

### **Response to Ecology Action Centre on 1.1.2:**

*The reference points are based on the index that covers a span of about 50 years. The limit was exceeded a few times in the early years, but has not been exceeded in the last 25 years or so, longer than the likely life span of winter skate. Also, the stock has recovered from the periods during which the index was near the limit, indicating that the limit that was specified did not result in long term impairment of recruitment. This supports the selection that the scientists made for the definition of the limit. And given that limit, the history of the index over 50 years provides considerable support that the current index is above the limit. These two points suggest that it is “highly likely” that the current biomass is above the level where recruitment would be impaired.*

*All of the survey data points since about 1997 are above the LRP. The original 75<sup>th</sup>tile was chosen based on the history of fishing and the history of the index. While a lower percentile might be justified, the 75<sup>th</sup> was based on the history and has not been rejected by ensuing dynamics of the stock.*

*The stock has been fluctuating around its target reference point, or has been above its target reference point, over recent years, fluctuating around the target for about a decade. This coincides with the period where the FMP was imposed. We note that there was a period early in the series when there was no management where the index fluctuated around and above the target for about 15 years. Given the target that was specified, it is highly likely that the stock is fluctuating around the target.*

### **Response to Ecology Action Centre on 1.2.1 and 1.2.2:**

*Concerns are expressed about the harvest strategy and harvest control rule and the fact that the management system of necessity is implemented for the skate complex rather than for the winter skate stock alone and that this sufficient to be “responsive to the status of the stock” and that the status of an individual stock may be masked. In the case of winter skate and the skate complex, it can be argued that the complex was designed to approximately follow the dynamics of winter skate with less precise monitoring of the other stocks. The winter skate are the predominate species in the Autumn survey about 70% (NEFMC 2017, NEFSC 2017) and it is also consistently is about 2/3 of the landings and 45% of the discards. Importantly, winter skate have exhibited a relatively stable proportion of the landings and discards over the last 15 years or so; The assumption of the HS/HCR was that management alterations of TAC for the complex are reflective of the dynamics of the catch of winter skate. The record, thus far, shows this has been effective.*

*However, this is not to say that this could not change in the future. Any HS/HCR for any fish stock could fail in the future due to unforeseen circumstances. But it appears that the FMP and the HS/HCR definition have built in some mitigation safeguards.*

*The following is taken from the Report: The skate are managed as a complex with Allowable Biological Catch (ABC) and Annual Catch Limit (ACL) specifications 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. . For skates, the Council set the ACL to be equal to the ABC. Total Allowable Landings 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 7% of the total landings. (NEFMC 2017, NEFSC 2017). The ACL is adjusted by a 25% buffer to get the Annual Catch Target (ACT). Then 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 2018).*

*Concerns with the HCR are not so much that it will not be effective in maintaining the harvest strategy, but rather that it might not be responsive enough if overfishing/overfished criteria are exceeded. The HCR adjusts the target catch proportional to the change in the three-year average of the combined fall survey. This rule is essentially attempting the maintain the fishing mortality rate at the specified  $F_{msy}$  surrogate. If the overall index decreased 50%, then the rule would essentially reduce fishing mortality rate by 50%. This rule is consistent with many HCRs where  $F$  decreases toward the origin when biomass declines below some limit.*

*The question is how effective the rule will be in an overfished/overfishing condition for winter skate. The HCR for the complex reduces the fishing mortality rate as soon as a decline in the survey is detected. Winter skate are the predominate portion of the autumn survey, so it is more likely that if other stocks decline, then the effect of the rule on winter skate will be more precautionary. On the other hand if the other stocks increase, the rule might indicate some increase in winter skate TAC might not have otherwise been warranted. But the 25% buffer and the discarding rules mitigate this possibility.*

*We reiterate our believe that this process, that imposes a 25% buffer, that evaluates the proportion of discards when making catch limit decisions and that adjusts the catches proportional to changes in the abundance index is sufficient to fulfill the requirement for the HS/HCR to be “responsive to the status of the stock.” Could it fail in the future? Perhaps, but the effectiveness over the last 8-9 years since implementation suggest that it is currently “working” and that is unlikely to fail within the certification period. Nevertheless, we believe the process should be revisited which is why we specified Conditions for 1.2.3 and 1.2.4 during the certification period to address this issue.*

**Response to Ecology Action Centre on 1.2.3 and 1.2.4:**

*We agree that there are serious limitations in the data and assessment. While the winter skate exists as a P2 species within the MSC certified spiny dogfish fishery, we cannot be sure that the procedures designed and implemented will continue to be acceptable in the future at the P1 level. Observer coverage for this fishery and the requirements for reporting winter skate both in log books and in fishery-dependent should be reexamined. This all leads to a need to revisit the stock assessment monitoring procedures and the efficacy of the HCR for winter skate and the complex. The dynamics of the stock does not indicate current problems, but the “age” of the stock assessment, the inherent vulnerability of the likely winter skate life history and data development in recent years support the need to revisit. We believe that 1.2.3 and 1.2.4 do not meet the 80 criteria, but that the current experience exceeds the 60 criteria. Nevertheless, conditions are imposed on 1.2.3 and 1.2.4 to attempt to address these issues.*

## 8 References

- COSEWIC. (2015). COSEWIC Assessment and Status Report on Winter Skate, *Leucoraja ocellata*. Retrieved from [https://www.sararegistry.gc.ca/virtual\\_sara/files/cosewic/sr\\_Winter%20Skate\\_2015\\_e.pdf](https://www.sararegistry.gc.ca/virtual_sara/files/cosewic/sr_Winter%20Skate_2015_e.pdf) April 10, 2019
- Dulvy, N.K., Notarbartolo di Sciara, G., Serena, F., Tinti, F. & Ungaro, N., Mancusi, C. & Ellis, J. 2006. *Dipturus batis*. The IUCN Red List of Threatened Species 2006: e.T39397A10198950. <http://dx.doi.org/10.2305/IUCN.UK.2006.RLTS.T39397A10198950.en>.
- Dulvy, N. K., Metcalfe, J. D., Glanville, J. , Pawson, M. G. and Reynolds, J. D. (2000), Fishery Stability, Local Extinctions, and Shifts in Community Structure in Skates. *Conservation Biology*, 14: 283-293. doi:10.1046/j.1523- 1739.2000.98540.x
- Iglésias, S. P., Toulhoat, L. and Sellos, D. Y. (2010), Taxonomic confusion and market mislabelling of threatened skates: important consequences for their conservation status. *Aquatic Conserv: Mar. Freshw. Ecosyst.*, 20: 319- 333. doi:10.1002/aqc.1083
- Fisheries and Oceans Canada. (n.d.). Little Skate, *Leucoraja erinacea*. Retrieved from <http://www.dfo-mpo.gc.ca/species-especes/profiles-profil/littleskate-raieherisson-eng.html> April 10, 2019.
- Sulak, K.J., MacWhirter P.D., Luke K.E., Norem A.D., Miller J.M., Cooper J.A., and Harris L.E. 2009. Identification guide to skates (Family Rajidae) of the Canadian Atlantic and adjacent regions. *Can. Tech. Rep. Fish. Aquat. Sci.* 2850: viii + 34 p.
- Whidden, J. A. (2015). Population demographics and species identification of two at-risk skates, Little Skate, *Leucoraja erinacea*, and Winter Skate, *Leucoraja ocellata*, in Minas Basin, Bay of Fundy. Retrieved from <http://scholar.acadiau.ca/islandora/object/theses:381>

## Appendix 4 Surveillance Frequency

1. The report shall include a rationale for any reduction from the default surveillance level following FCR 7.23.4 in Table 4.1.
2. The report shall include a rationale for any deviations from carrying out the surveillance audit before or after the anniversary date of certification in Table 4.2
3. The report shall include a completed fishery surveillance program in Table 4.3.

**Table 4.1 : Surveillance level rationale**

Year	Surveillance activity	Number of auditors	Rationale
Dogfish 1	Remote audit	3 off site	The Dogfish UoCs are due for their first surveillance imminently but the Winter skate UoAs are not yet certified. It is therefore recommended that there be a remote audit to cover the first dogfish surveillance (all information is available remotely) and to then get the two joined up for the 2 <sup>nd</sup> surveillance with an onsite audit
2	On-site audit	3 on site	Default level-first audit for both dogfish and Winter skate combined
3	On-site audit	3 on site	Default level-may be revisited following 2 <sup>nd</sup> audit depending on conditions progress and ability to verify remotely
4	On-site audit and reassessment	3 on site	Default level and in combination with reassessment

**Table 4.2: Timing of surveillance audit**

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
1 (dogfish only)	May 2019	July 2019	To enable winter skate report to be finalized before the first dogfish audit
2	June 2020 (for skate scope extension)	June or July 2020	Near anniversary of combined fishery
3	June 2021	June or July 2021	Near anniversary of combined fishery
4	June 2022	June or July 2022	Near anniversary of combined fishery

**Table 4.3: Fishery Surveillance Program**

Surveillance Level	Year 1	Year 2	Year 3	Year 4
Level 4	Off-site surveillance audit	On-site surveillance audit	On-site surveillance audit	On-site surveillance audit & re-certification site visit

## Appendix 5 Objections Process

(REQUIRED FOR THE PCR IN ASSESSMENTS WHERE AN OBJECTION WAS RAISED AND ACCEPTED BY AN INDEPENDENT ADJUDICATOR)

The report shall include all written decisions arising from an objection.

(Reference: FCR 7.19.1)