

# Skate Advisory Panel Meeting

March 22, 2023  
in Warwick, RI and via webinar

# Introductions

## Skate Advisory Panel

Jeff Kneebone, MA (Chair)

James Dopkin, NJ

Patrick Duckworth, RI

Sonja Fordham, DC

Andrea Incollingo, RI

Gregory Mataronas, RI

Randall Morgan, MD

Daniel Nordstrom, RI

Ted Platz, RI

John Whiteside, MA

## Skate Committee

Scott Olszewski, RI DEM (Chair)

## Council Staff

Dr. Rachel Feeney (PDT Chair)

Connor Buckley

# Agenda

- 8:30** Introductions, approval of agenda, other updates
- 8:40** NEFMC Advisory Panel policies
- 8:50** Overview of 2023 work priorities and timeline
- 9:00** Discuss recent fishery performance and outlook for Fishing Year 2023
- 9:30** Thorny skate white paper (progress update, develop recommendations)
- 10:00** Break
- 10:10** Fishing Year 2024-2025 skate specifications (update, recommendations)
- 12:20** Other business and adjourn



8:40 a.m.  
**NEFMC Advisory Panel**  
policies  
see separate slide deck

**8:50 a.m.**  
**2023 skate work priorities  
and timeline**



# 2023 skate work priorities

Task	Progress
“Develop 2024-2025 specifications. With smooth skate and barndoor skate rebuilt, consider measures that would allow for expanded possession by the fishery.”	<ul style="list-style-type: none"><li>• Initial PDT work on discussion document.</li><li>• Initial discussions today by AP and Cte.</li></ul>
“Develop measures to reduce gillnet interactions with protected species (sturgeon, large whales).”	<ul style="list-style-type: none"><li>• NEFMC and MAFMC decided to have a joint action focused on dogfish and monkfish fisheries. No longer a skate task for 2023.</li></ul>
“Staff: Support management track assessment.”	<ul style="list-style-type: none"><li>• Initial PDT discussion of scope.</li><li>• Assessment proceeding on schedule this summer.</li></ul>
“Develop a white paper on potential approaches to support thorny skate rebuilding.”	<ul style="list-style-type: none"><li>• PDT prepared initial draft</li><li>• Initial discussions today by AP and Cte.</li></ul>

# Skate timeline: 2023

*We are here* →

	Thorny Skate White Paper	Management Track Assessment	2024-2025 Specifications and other measures	2024 Management Priorities	Meeting/Date
Jan					
Feb	Input on outline, drafting	brief update	review action plan, discuss scope		2/17 PDT
March	Provide input	brief update	Provid input		3/22 AP
	Review progress, provide direction	brief update	Review progress, provide direction		3/22 Cte
April	Progress update	brief update	Progress update		4/18-20 NEFMC
May		Oversight Panel			5/22 AOP
			PDT developing action		
June	Receive final draft, recommend next steps		Provide input		early June AP
	Receive final draft, recommend next steps		Review progress, provide direction		early June Cte
	Receive final draft				6/28-30 NEFMC
July			PDT developing action		
August					
Sept			Provid input	Recomends draft	early Sept AP
			Review progress, provide direction	Recomends draft	early Sept Cte
		Peer Review			9/18-22 peer review
		update	Receive update	Sets draft	9/26-28 NEFMC
Oct		Report available	PDT develops ABC		early October
			SSC recommends ABC		mid October
			PDT finalizes alternatives, impacts		late Oct/early Nov
Nov		Receive report, peer review	prefered alternatives		Mid-Nov AP
		Receive report, peer review	prefered alternatives		Mid-Nov Cte
Dec		Receive report, peer review	Final action	NEFMC finalizes	12/5-7 NEFMC

9:00 a.m.

# Recent fishery performance and outlook for FY 2023

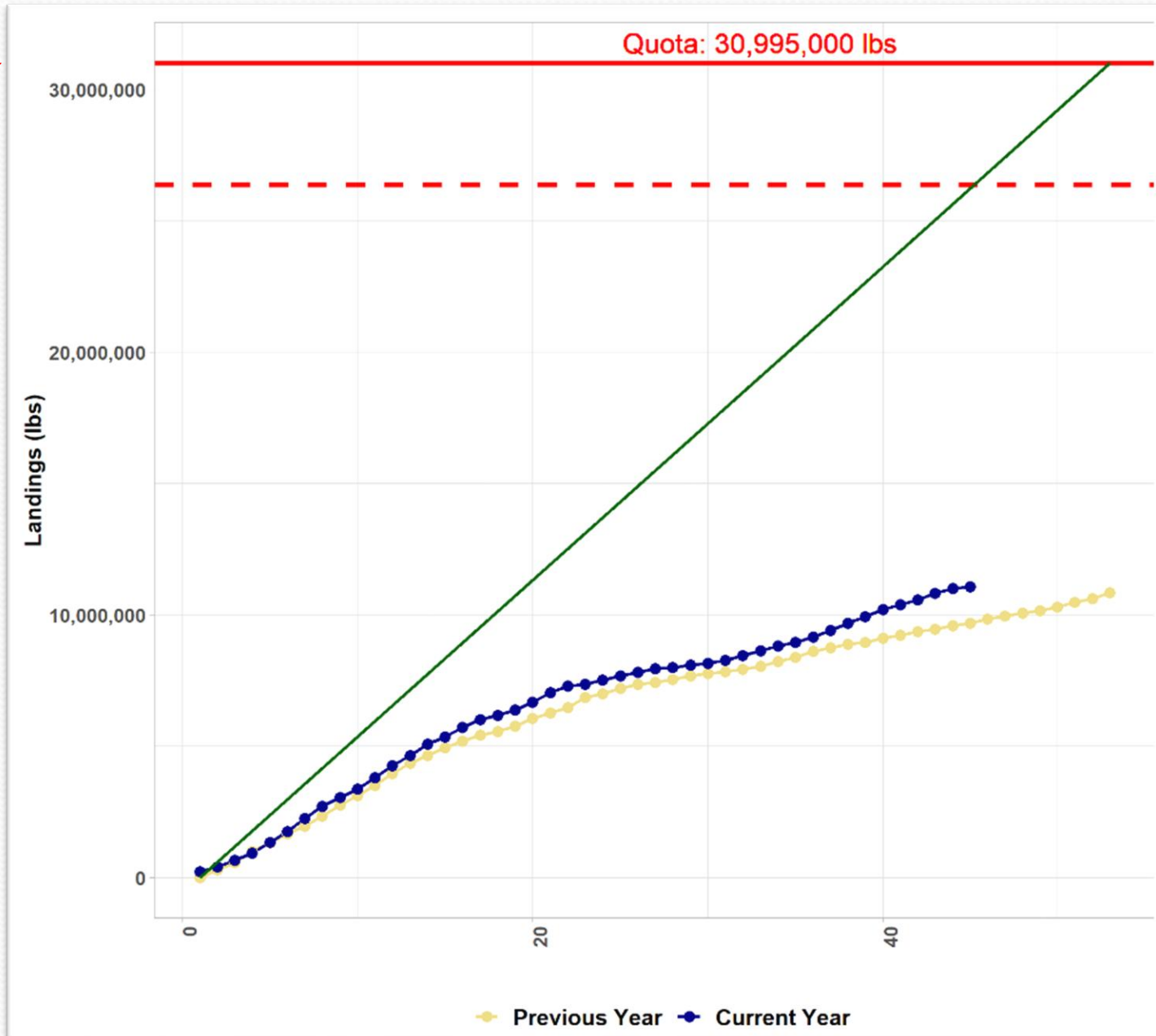


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# FY 2022 wing landings (as of 3/11/23, 85% of FY)

Annual  
quota



Wing Season 2 is  
Sept 1 – Apr 30  
Possession limit = 5,000  
lb (wing weight)

36% of annual quota  
landed so far.

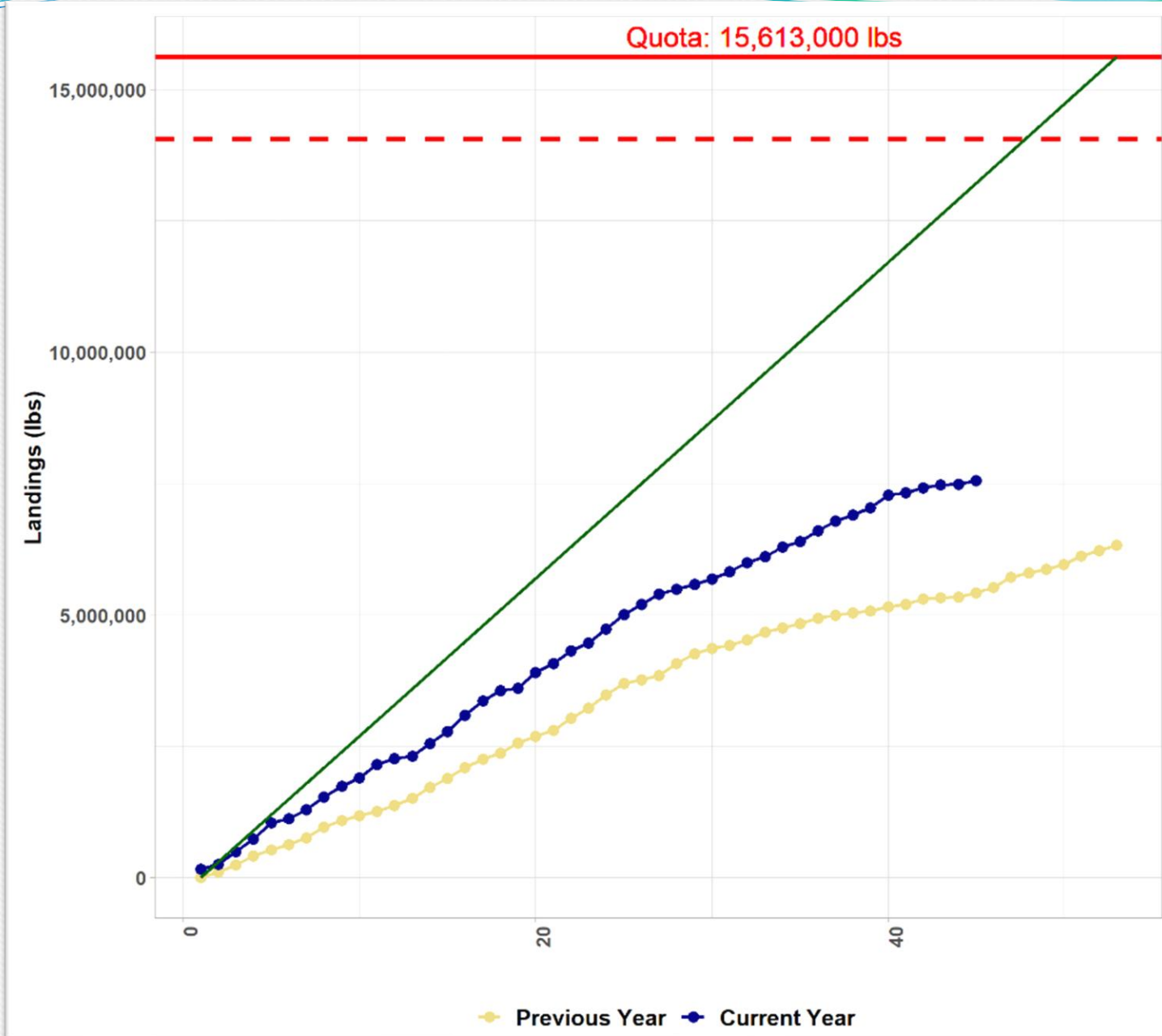
Only includes landings  
with a federal skate  
permit (NEW method)

Figure from GARFO weekly  
quota monitoring reports



# FY 2022 bait landings (as of 3/11/23, 85% of FY)

Annual quota



Bait Season 3 =  
Nov 1 – Apr 30  
Possession limit = 25,000  
lb (whole weight)

48% of annual quota  
landed so far.

Only includes landings  
with a federal skate  
permit (NEW method)

Figure from GARFO weekly  
quota monitoring reports

# Recent in-season performance

	TAL	Landings	
	lb	lb	%
<b>FY 2019</b>			
Wing	23,146,333	18,620,780	80%
Bait	11,660,249	8,537,124	73%
<b>Total</b>	<b>34,806,582</b>	<b>27,157,904</b>	<b>78%</b>
<b>FY 2020</b>			
Wing	26,188,712	20,200,770	77%
Bait	13,192,462	7,496,802	57%
<b>Total</b>	<b>39,381,174</b>	<b>27,697,572</b>	<b>70%</b>
<b>FY 2021</b>			
Wing	26,188,712	10,762,565	41%
Bait	13,192,462	6,361,527	48%
<b>Total</b>	<b>39,381,174</b>	<b>17,124,092</b>	<b>44%</b>
<b>FY 2022 (as of 3/11/23)</b>			
Wing	30,994,753	11,076,748	36%
Bait	15,613,119	7,560,782	48%
<b>Total</b>	<b>46,610,076</b>	<b>18,620,835</b>	<b>40%</b>

# Recent year-end performance

	Live weight (lb)	Percent of ACL
<b>FY 2019 (ACL = 31,327 mt)</b>		
Northeast skate federal commercial landings	27,807,878	40%
Northeast skate state-permitted only vessel landings	2,532,286	4%
Northeast skate non-landed bait	463,069	0.6%
Northeast skate estimated dead discards	13,144,115	19%
Northeast skate recreational catch	2,229,125	3%
<b>Total Northeast skate catch</b>	<b>46,176,472</b>	<b>67%</b>
<b>FY 2020 (ACL = 32,715 mt)</b>		
Northeast skate federal commercial landings	28,223,460	39%
Northeast skate state-permitted only vessel landings	1,880,350	3%
Northeast skate non-landed bait	485,421	0.7%
Northeast skate estimated dead discards	18,791,428	26%
Northeast skate recreational catch	692,135	1%
<b>Total Northeast skate catch</b>	<b>50,072,794</b>	<b>69%</b>
<b>FY 2021 (ACL = 32,715 mt)</b>		
Northeast skate federal commercial landings	17,806,964	25%
Northeast skate state-permitted only vessel landings	1,655,445	2%
Northeast skate non-landed bait	382,062	0.5%
Northeast skate estimated dead discards	14,556,155	20%
Northeast skate recreational catch	1,111,664	2%
<b>Total Northeast skate catch</b>	<b>35,512,289</b>	<b>49%</b>

# Discussion questions/starters

- What factors have influenced recent fishing activity and how (e.g., possession limits, environment/ecosystem, species distribution, domestic and foreign markets, costs)?
- How might these factors change in FY 2023? How do you expect the fishery to adjust?
- How has the global pandemic changed the fishery? Do you see the fishery returning to a pre-pandemic state or is there a new normal emerging?
- Have any recent regulatory changes affected the fishery and how?
- Are the current fishery regulations appropriate? How could they be improved and how would the improvements affect the fishery?
- What other factors may impact the fishery going forward?

# 9:30 a.m.

## Thorny skate white paper

### Purpose

- Review progress on developing white paper
- Recommend scope and content

### Relevant documents

2 – Draft white paper

## Issues

- 5 years remaining in thorny skate rebuilding plan, and biomass is 3.6% of target.
- 2023 skate work priority

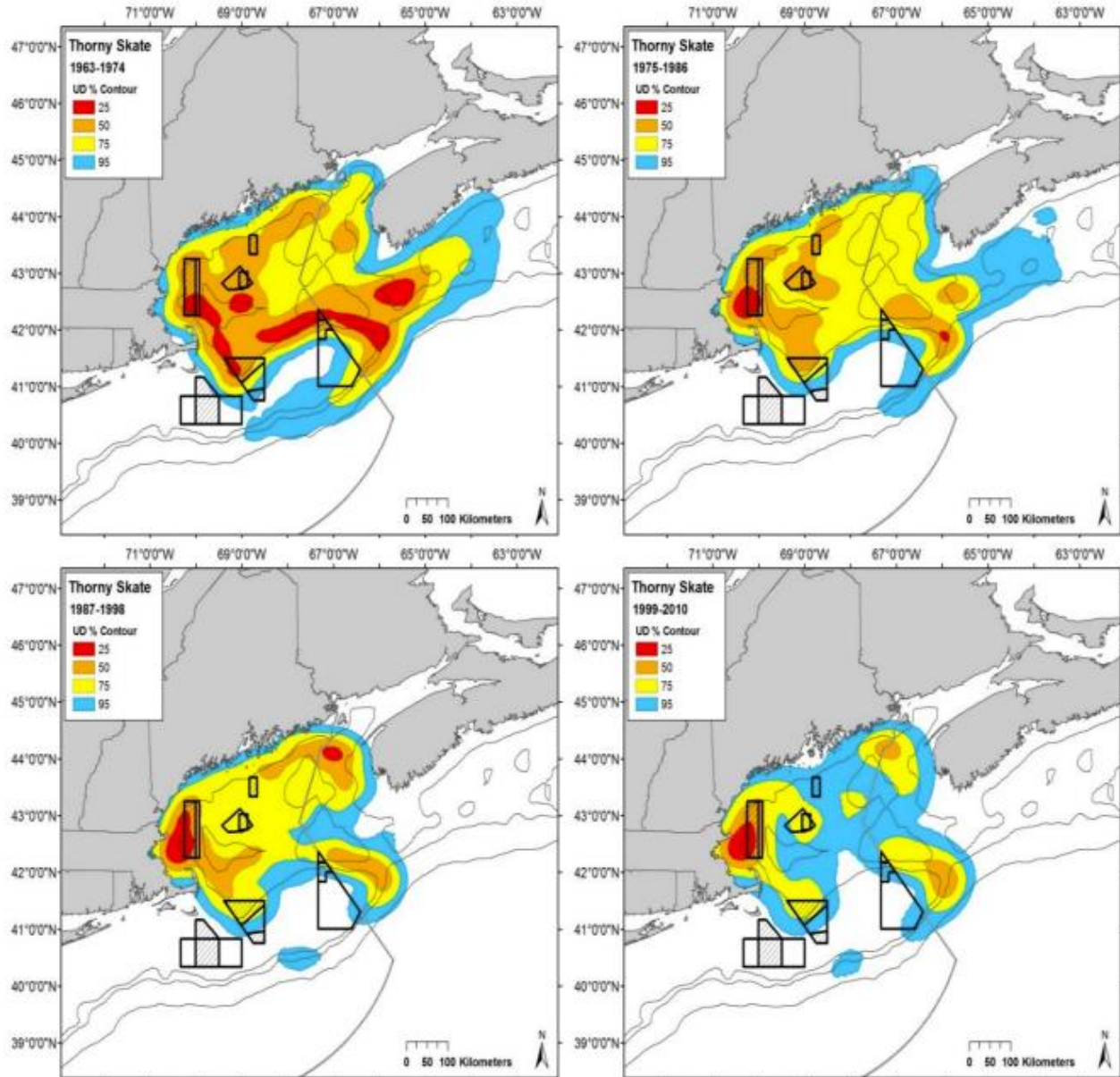
## Solutions

- Review recent research and updated status of thorny skate
- Identify potential approaches to support rebuilding

## Draft Outline

1. Introduction.....	
2. Background.....	
2.1. Habitat and distribution.....	
2.2. Life history.....	
2.3. Diet and predation.....	
2.4. Fishing mortality.....	
2.5. Stock status .....	
2.6. Canadian waters .....	
2.6. Vulnerability to climate change .....	
3. Fishery regulations affecting thorny skate .....	
4. Prior Council discussions on the rebuilding of thorny skate .....	
5. Potential approaches .....	

# Background



## Distribution

- Broadly distributed across the North Atlantic
- In U.S. waters, the highest density is in the Gulf of Maine
- Appear to be contracting into the western Gulf of Maine

## Habitat

- 20 to 1,400 meters in depth
- Temperatures from  $-1.3$  to  $14^{\circ}\text{C}$
- Preference for deeper, colder water, and rough bottom habitat



# Background

## Life history

- Large-bodied, reaching a total length of up to 105 cm.
- Mature at smaller sizes and have a shorter life-span the further north they are, but in the GOM there are two distinct reproductive morphs.

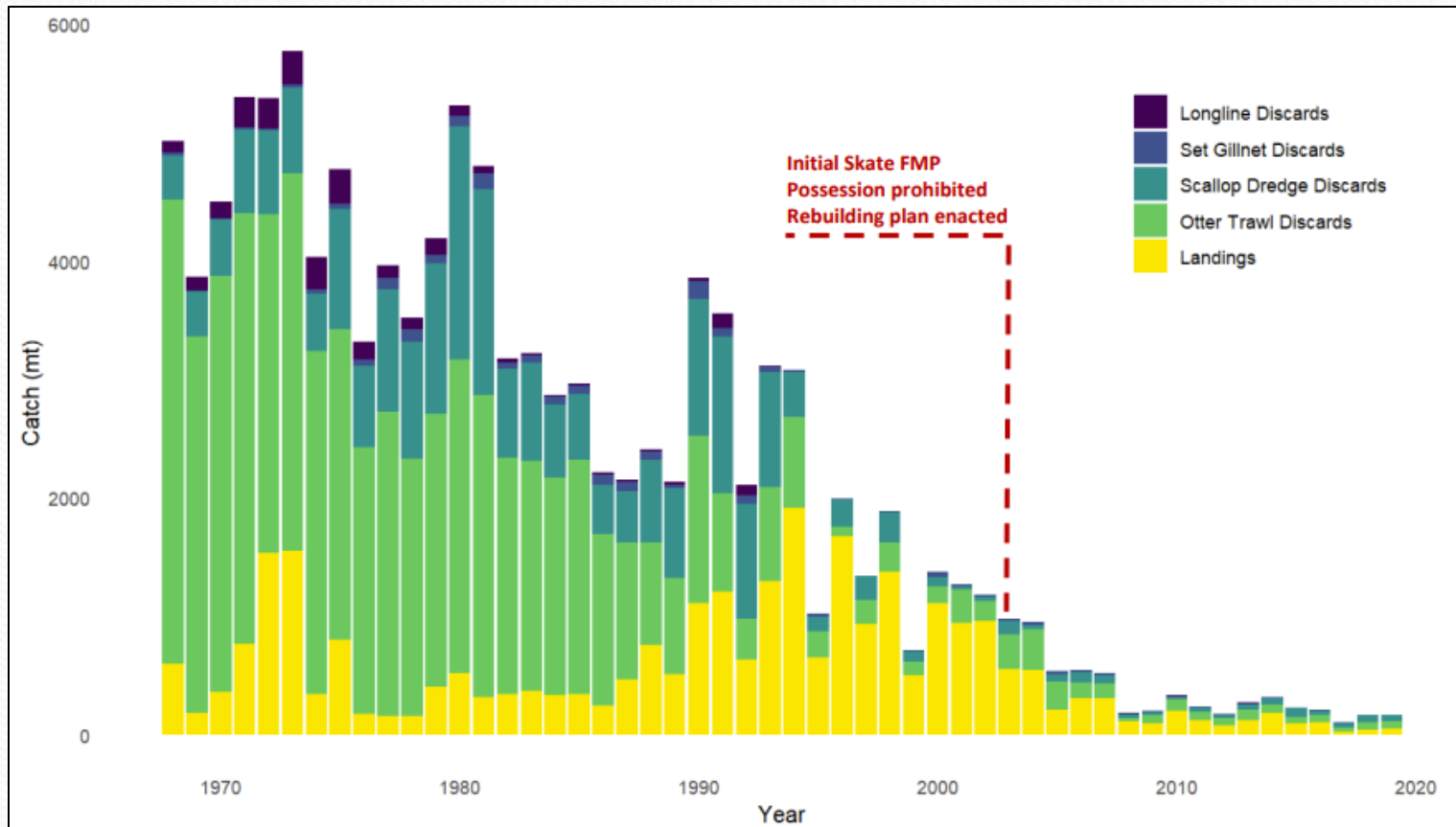
## Diet & predation

- Generalist diet, but they may be limited by lack of preferred prey (herring and white hake).
- Gray seals may also be predated on thorny skate as the seal population increases, and this may be shifting in the GOM.

## Vulnerability to climate change

- The GOM has warmed faster than 99% of the global ocean, and thorny skate have been found to be both highly exposed and sensitive to climatic stressors.
- Modeling of thorny skate habitat under climate change forecasted a 30-40% reduction by 2050 and up to 70% by 2100 under a high-emissions scenario.

# Background



## Fishing mortality

- Targeted catch was prominent before 2003 prohibition.
- Overfishing was occurring until 2013.
- Catch is estimated to have declined from over 5,000 mt in the late 1960s to 200-300 mt since 2008.

Landings are attributed to species using NEFSC survey proportions at length

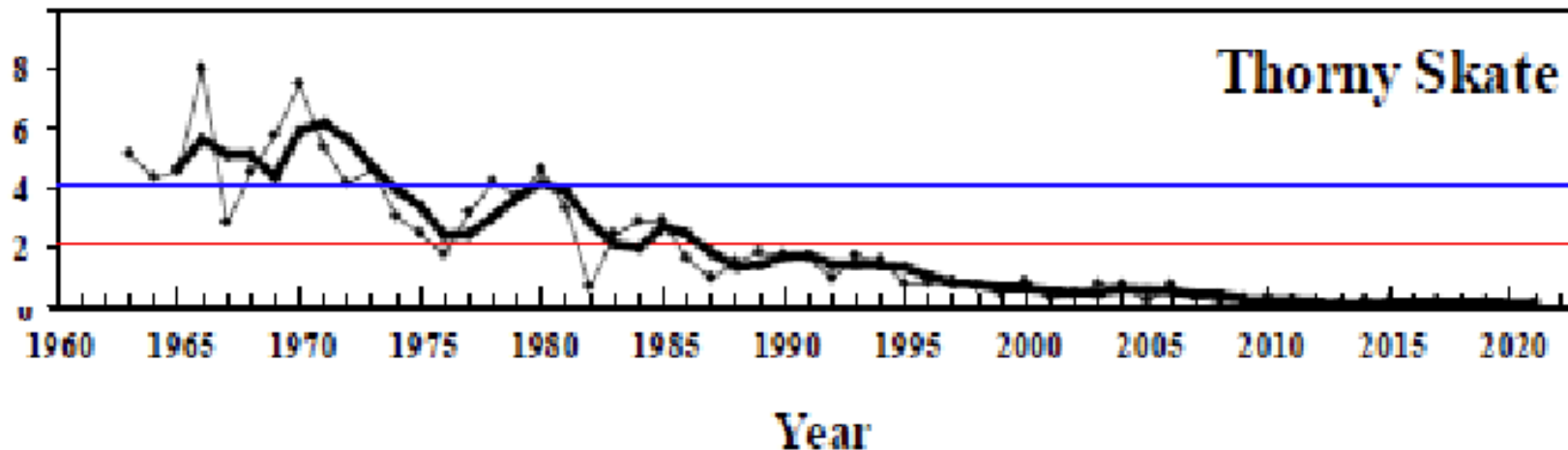
# Background

## Stock status

- Considered overfished, and overfishing is not occurring
- Biomass is 3.6% of target
- Endangered Species Act petitions
  - 2011 – determined a review was not warranted
  - 2015 – a full review was conducted but determined listing as endangered was not warranted

## Abundance in Canadian waters

- Scotian Shelf - 90% decline
- Georges Banks – 62% decline
- Grand Banks – declined between 1970 and early 1990s but has since stabilized
- Thorny skate is retained throughout Atlantic Canada, but directed fishing is only occurring on the Grand Banks



# Regulations/prior discussions

**2003** – Skate FMP established the rebuilding plan and prohibition on possession.

**2009** – Amendment 3 proposed skate specific habitat closure to conserve thorny skate but were rejected by Council.

**2013** – NOAA Fisheries notified Council that overfishing was occurring in addition to being overfished and that the Council must address this.

**2014** – Overfishing no longer occurring, rebuilding listed as a Council priority.

**2015** – PDT suggested reorganizing skates under separate FMPs, with thorny skate to be managed under the Northeast Multispecies FMP.

**2020** – PDT begins reporting recent thorny skate research in Annual Monitoring Reports.

**2022** – Council set the development of a white paper on thorny skate rebuilding as a 2023 work priority.

# Potential approaches

## **Closed areas?**

- Due to the sedentary behavior of the species, implementing closures to protect areas with higher thorny skate bycatch may promote recovery

## **Gear configurations?**

- Skate-specific gear restrictions could be applied to skate bait and/or wing trips that minimize thorny skate bycatch
- Currently, the Skate FMP does not have specific gear requirements

## **Other?**

# Discussion questions

- Does the draft white paper meet expectations regarding the potential scope of this document? If not, what other topics should be covered?
- Is there other information that could be informative that is not yet included?
- Do fishermen's observations and knowledge about thorny skate align with what has been described through scientific literature? What are the areas of agreement and difference?
- For the section on potential management approaches, what other approaches could be explored through this paper? For example, are there possible gear or area-based measures to explore?

# 10:10 a.m.

## 2024-2025 Specifications Action

### Purpose

- Review specifications process
- What's ahead for 2023 assessment
- Begin discussion on if possession limits should change, especially barndoor and smooth skate restrictions

### Relevant documents

- 3a – discussion document
- 3b – PDT memo re recreational catch
- 3c – Action plan
- 4 – 2022 Annual Monitoring Report



**2023 Council work priority:**

*“Develop 2024-2025 specifications. With smooth skate and barndoor skate rebuilt, consider measures that would allow for expanded possession by the fishery.”*

<b>Potential scope of action</b>	
<b>FY 2024-2025 Specifications</b>	<b>Management Measures</b>
<ul style="list-style-type: none"><li>• Acceptable Biological Catch (ABC)</li><li>• Annual Catch Limit (ACL)</li><li>• Total Allowable Landings (TAL)</li><li>• Wing and Bait sub-TALs</li></ul>	<ul style="list-style-type: none"><li>• Adjustments to possession limits</li><li>• Expanding possession of barndoor</li><li>• Allowing smooth skate possession</li></ul>

- Barndoor and smooth skate possession may require a framework adjustment to FMP vs simpler specifications action.
- Depending on scope, document may be an environmental assessment vs simpler supplemental information report.
- SSC recommends ABC in October, final action in December.



# Skate reference points

- Skates are been assessed as a complex using an index-based method and proxies used to identify Maximum Sustainable Yield and the Biomass at MSY ( $B_{MSY}$ ).
  - Issues with species identification in fishery catch.
  - Skate population dynamics largely unknown.
- NEFSC bottom trawl data (spring survey for little skate, fall for other skate) used to indicate relative abundance.
- $B_{MSYproxy} = B_{target}$  = the 75<sup>th</sup> percentile (average for barndoor) of its survey biomass index, measured in kg/tow during a specific set of years for each species.
- Skate complex  $MSY_{proxy}$  calculated by:
  - “Catch” is total landings from dealer data, vessel to vessel transfers from VTR data and dead discards (kg).
  - “Biomass” is the survey biomass index (kg/tow).
  - The  $MSY_{proxy}$  for each species is the median catch/biomass across the entire time series is multiplied by its  $B_{MSYproxy}$  (kg/tow). Then, sum all seven skate  $MSY_{proxies}$ .

# Skate reference points

- Last formal assessment was in 2008, but NEFSC has updated stock status annually.
- Because of reliance on proxies, fishing mortality rates are undetermined.
- Overfishing definition:
  - If the % change in the 3-year moving average of the survey biomass index  $>$  average CV of the index time series, then fishing mortality is assumed to be  $> F_{MSY}$   $\rightarrow$  then overfishing is occurring.
- Overfished definition:
  - If 3-year moving average of survey biomass index  $< B_{threshold}$   $\rightarrow$  then overfished.
  - Where  $B_{threshold} = 0.5 * B_{MSYproxy}$

# 2023 management track assessment

## Process

- Northeast Regional Coordinating Council sets assessment schedule.
- Assessment Oversight Panel evaluates and approves the plan for a given assessment (meets May 22).
- NEFSC conducts the assessment (summer).
- Assessment Peer Review panel reviews Level 2 and 3 assessments (meets Sept. 18-22).

## Potential Scope (TBD)

- Likely Level 2. Still using same index-based method for skates.
- Regular updates to the reference points and determination of stock status.
- Could update data time series for determining  $MSY_{proxy}$ , consider how regularly to update.
- Could examine methods for attributing fishery catch by species. Currently, the species and length-frequency data in the survey are used to attribute fishery catch by species.
- Could add recreational catch data to the catch time series, considering species-level data.
- Other? Depends on human resources available.

# ABC development

## ABC Control Rule:

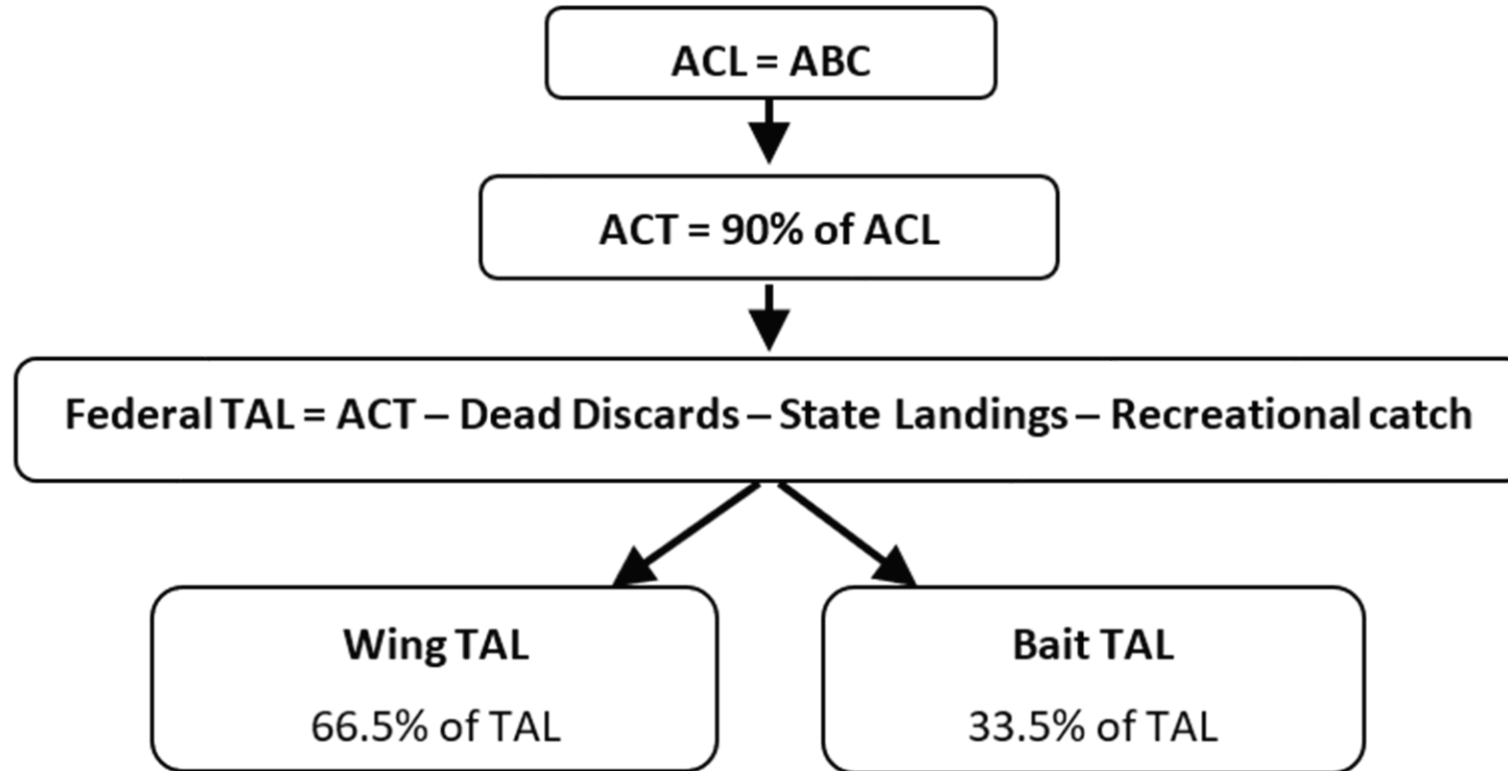
1. For each species, multiply the median ratio of catch/biomass for time series by the 3-year moving average stratified mean biomass.
2. Sum over the seven skate species in the management unit.

Table 1. Years of data used to set specifications

			FY 2020-21	FY 2022-23	FY 2024-25	
			(implemented)	(implemented)	( <u>control rule</u> )	(expected)
Survey indices	Spring	Little	2017-2019	2019, 2021	2021-2023	2021-2023
	Fall	Rosette & clearnose	2016, 2018	2018-2019	2020-2022	2021-2022
		Barndoor, thorny, smooth, winter	2016-2018	2017-2019	2020-2022	2021-2022
Catch/biomass time series			Time series to 2016	Times series to 2016	Not always updated	May update to 2022

# Specifications flow chart

Figure 2. Formula for skate specifications setting.



## Reminders!

- “State landings” revised
  - Old = never had a federal permit (# = 000000)
  - New = no federal permit on day of landing
- “Recreational catch” new (use assessment data)

# Prior specifications

**Table 2. Specifications for FY 2020-2021 and FY 2022-2023.**

		<b>FY 2020-2021</b>	<b>FY 2022-2023</b>
		(mt)	(mt)
<b>ABC = ACL</b>	live weight	<b>32,715</b>	<b>37,236</b>
ACT (90% of ACL)	live weight	29,444	33,513
Dead Discards	live weight	10,942	11,856
State Landings	live weight	638	515
<b>Federal TAL</b>	live weight	<b>17,864</b>	<b>21,142</b>
Wing TAL (66.5% of TAL)	live weight	11,879	14,059
	wing weight	5,233	6,193
Bait TAL (33.5% of TAL)	live weight	5,984	7,082

# Possession limits

**Table 3. Skate seasonal management with FY 2020-2023 possession limits.**

Fishery	Season	Dates	% of TAL	Possession Limit	Trigger	Incidental Limit
Wing	1	May 1 – Aug 31	57%	3,000 lb wing weight (6,810 lb whole weight)	85% of seasonal TAL	500 lb wing weight (1,135 lb whole weight)
	2	Sept 1 – Apr 30	remainder	5,000 lb wing weight (11,350 lb whole weight)	85% of annual TAL	
Bait	1	May 1 – Jul 31	30.8%	25,000 lb whole weight	90% of seasonal TAL	8,000 lb whole weight
	2	Aug 1 - Oct 31	37.1%		90% of seasonal TAL	
	3	Nov 1 – Apr 30	remainder		80% of annual TAL	

## Barndoor skate

- Declared overfished in 1999, possession prohibited.
- Declared rebuilt in 2016, possession allowed since FY 2018, 25% of wing limit.

## Smooth skate

- Declared overfished in 1999, possession prohibited in GOM (doesn't occur elsewhere).
- Declared rebuilt in 2018, possession still prohibited.

## Issues:

- Recreational catch has been counted against the ACL, contributing to catch that could triggering accountability measures for commercial fishery. Has not been used to set ABC, and no deduction during specifications.

## Solutions:

- In 2022, in considering how to better account for known sources of catch through the cycle of skate management, Council determined that recreational skate catch needed more consistent tracking.
  - NEFSC - 2023 skate assessment plans to include recreational skate catch data when updating reference points.
  - PDT - FY 2024-2025 specifications plans to include recreational catch in ABC and deduction
  - GARFO - Continue including recreational catch in ACL accounting.

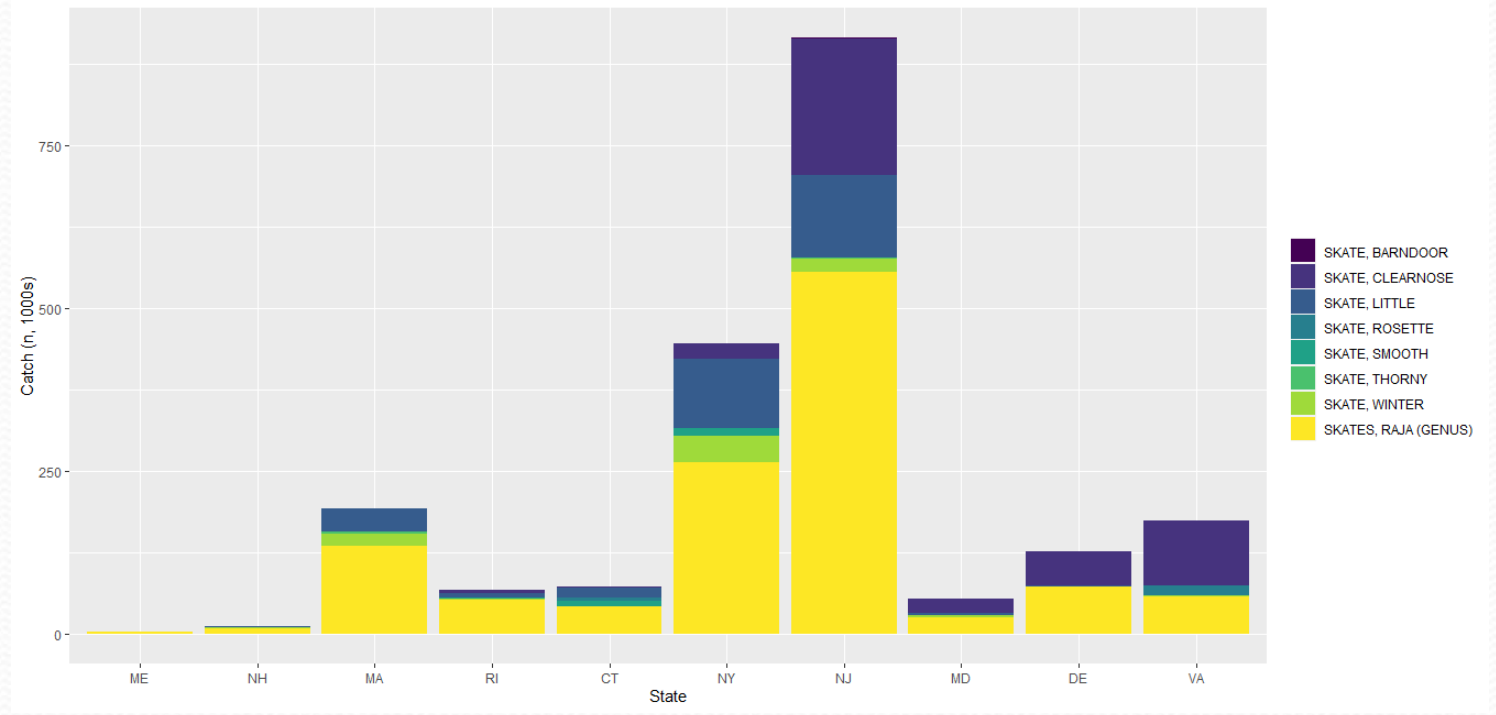
PDT prepared memo to address several Council questions raised.



# Recreational skate catch

## Who is recreational catching skates?

- Mostly NJ/NY
- Private/rental boats fishing in state waters, and shore-fishing
- May/June – July/Aug, increasingly into Sept/Oct
- No evidence of targeted fishing



## How is recreational skate catch calculated?

- Marine Recreational Information Program (MRIP) reports sampled, reported, and discarded catch
- Estimates are **highly uncertain** due to species identification challenges and low sampling rates

# Recreational skate catch

## How much skate catch can be attributed to recreational fishing?

Table 1. Recreational catch, total catch, and annual catch limit of Northeast skate complex, FY 2015-2021

Year	Recreational catch (mt)*	Total catch (mt)	ACL (mt)	Recreational catch as a % of total catch	Recreational catch as % of ACL
2015	416	28,111	35,479	1.5%	1.2%
2016	307	24,549	31,081	1.3%	1.0%
2017	1,528	25,294	31,081	6.0%	4.9%
2018	1,088	24,128	31,327	4.5%	3.5%
2019	1,011	20,696	31,327	4.9%	3.2%
2020	314	22,461	32,715	1.4%	1.0%
2021	504	16,108	32,715	3.1%	1.5%

\*Recreational catch may be higher than reported

# Discussion questions

- Should the Council make any recommendations regarding the 2023 management track assessment for skates?
- Is there additional information that the PDT can provide about recreational catch of skates that could be helpful (beyond what is in separate memo)?
- Should the possession limits in place for FY 2022-2023 be maintained in FY 2023-2024 or should adjustments be considered? How so?
- Should the Council consider allowing increased possession of barndoor skate and allow possession of smooth skate? Before the development of alternatives for expanding possession of smooth and/or barndoor skate, a goal(s) should be identified? Is the Committee ready to identify a goal? What additional information would be helpful?

12:20 p.m.  
Other business



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