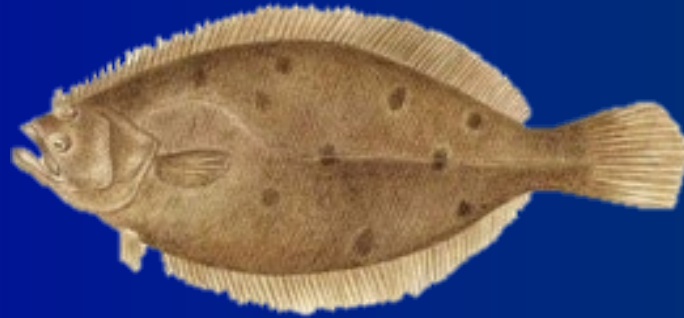




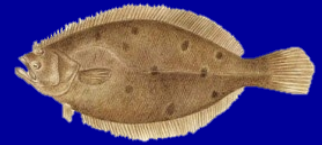
Summer Flounder



Council and Board
2024-2025 Specifications

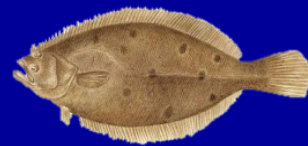
August 8, 2023

Overview



- Review:
 - 2023 management track assessment and stock status
 - Recent fishery performance
 - Advisory Panel Fishery Performance Report
 - SSC recommendations
 - Monitoring Committee recommendations
- Council and Board Objectives:
 - Adopt recommendations for 2024-2025 ACLs, ACTs, comm. quotas, and RHLs
 - Review commercial management measures and recommend changes if warranted for 2024-2025
 - Overview of ongoing evaluation of summer flounder minimum mesh size and exemptions

Stock Status: 2023 Management Track Assessment



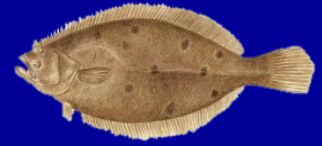
SSB

- Not overfished in 2022
- 2022 SSB = 40,994 mt, 83% of SSB_{MSY} = 49,561 mt

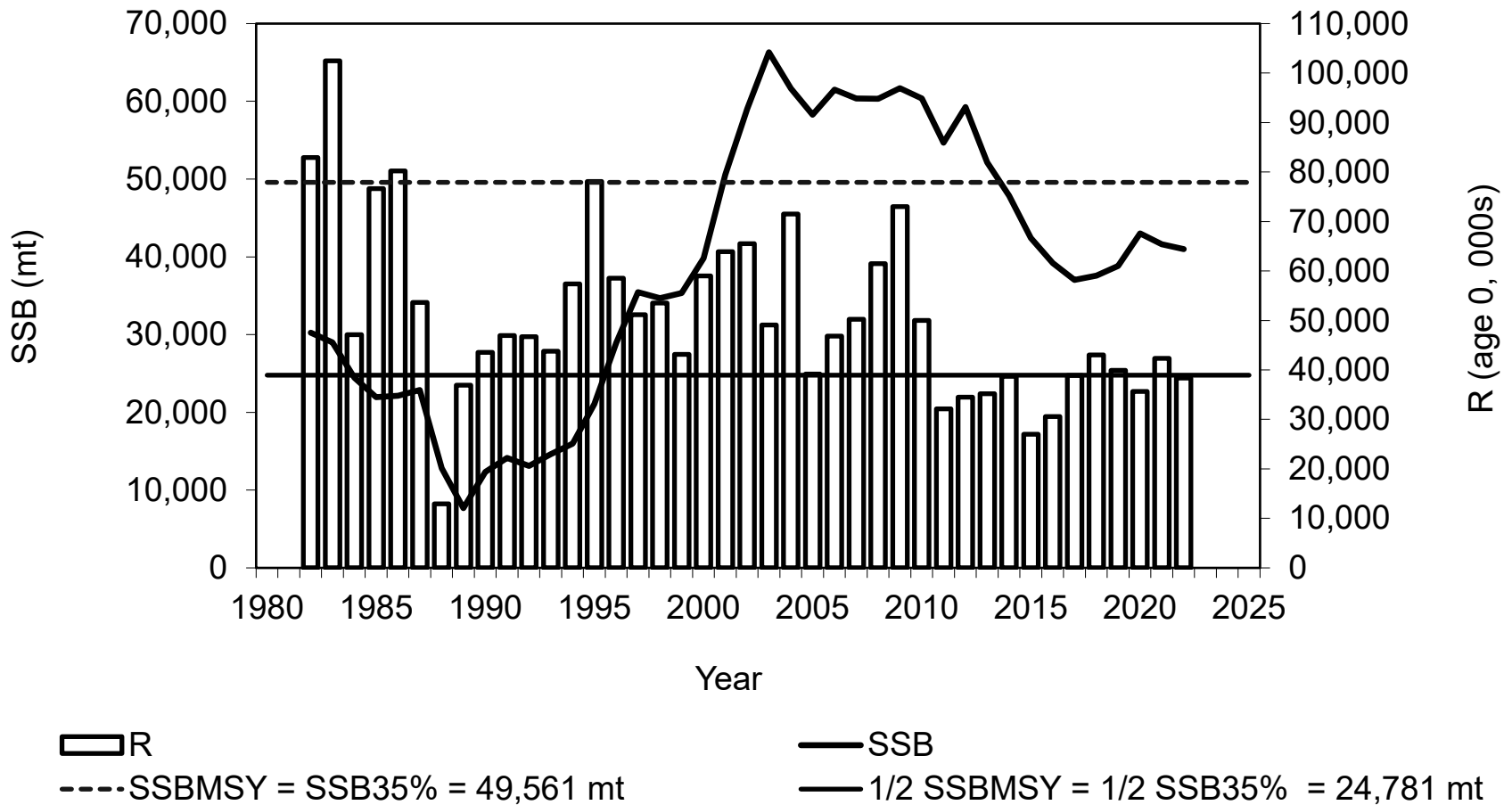
F

- Overfishing is occurring in 2022
- 2022 $F = 0.464$, 103% of F_{MSY} proxy = 0.451

SSB and Recruitment 2023 MTA

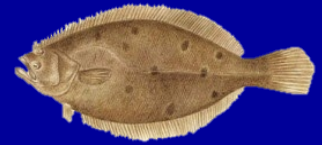


Spawning Stock Biomass (SSB) and Recruitment (R)

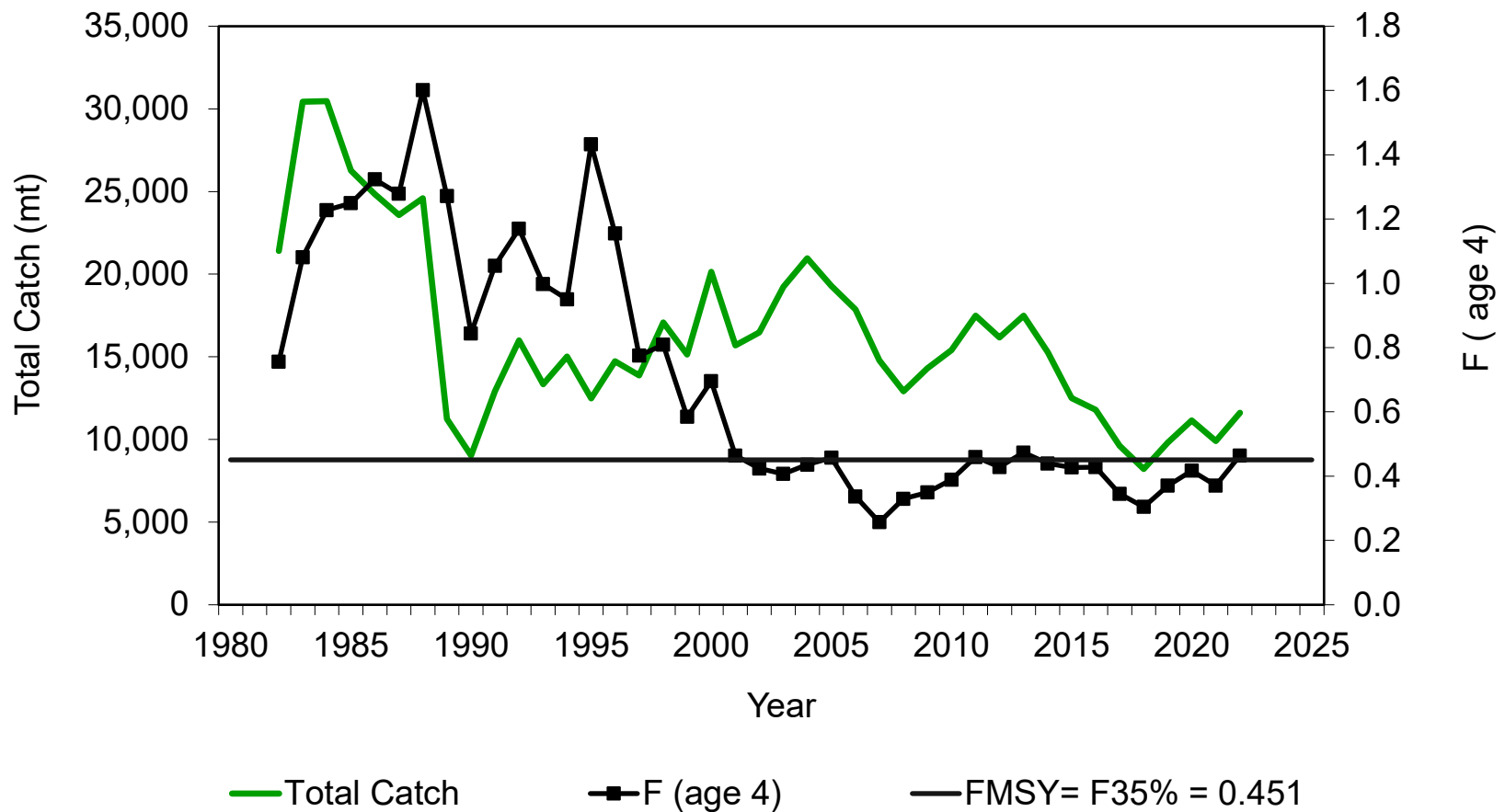


Fishing Mortality

2023 MTA



Total Catch and Fishing Mortality (F)



OFL and ABC Performance

Year	Total dead catch	OFL	OFL over/under	ABC	ABC over/under
2014	22.27	26.76	-17%	21.94	+2%
2015	18.22	27.06	-33%	22.57	-19%
2016	17.16	18.06	-5%	16.26	+6%
2017	12.00	16.76	-28%	11.30	+6%
2018	12.65	18.69	-32%	13.23	-4%
2019	21.63	30.00	-28%	25.03	-14%
2020	24.60	30.94	-21%	25.03	-2%
2021	21.82	31.67	-31%	27.11	-20%
2022	25.61	36.28	-29%	33.12	-23%
2023	--	34.98	--	33.12	--

Limits/catch values in millions of pounds

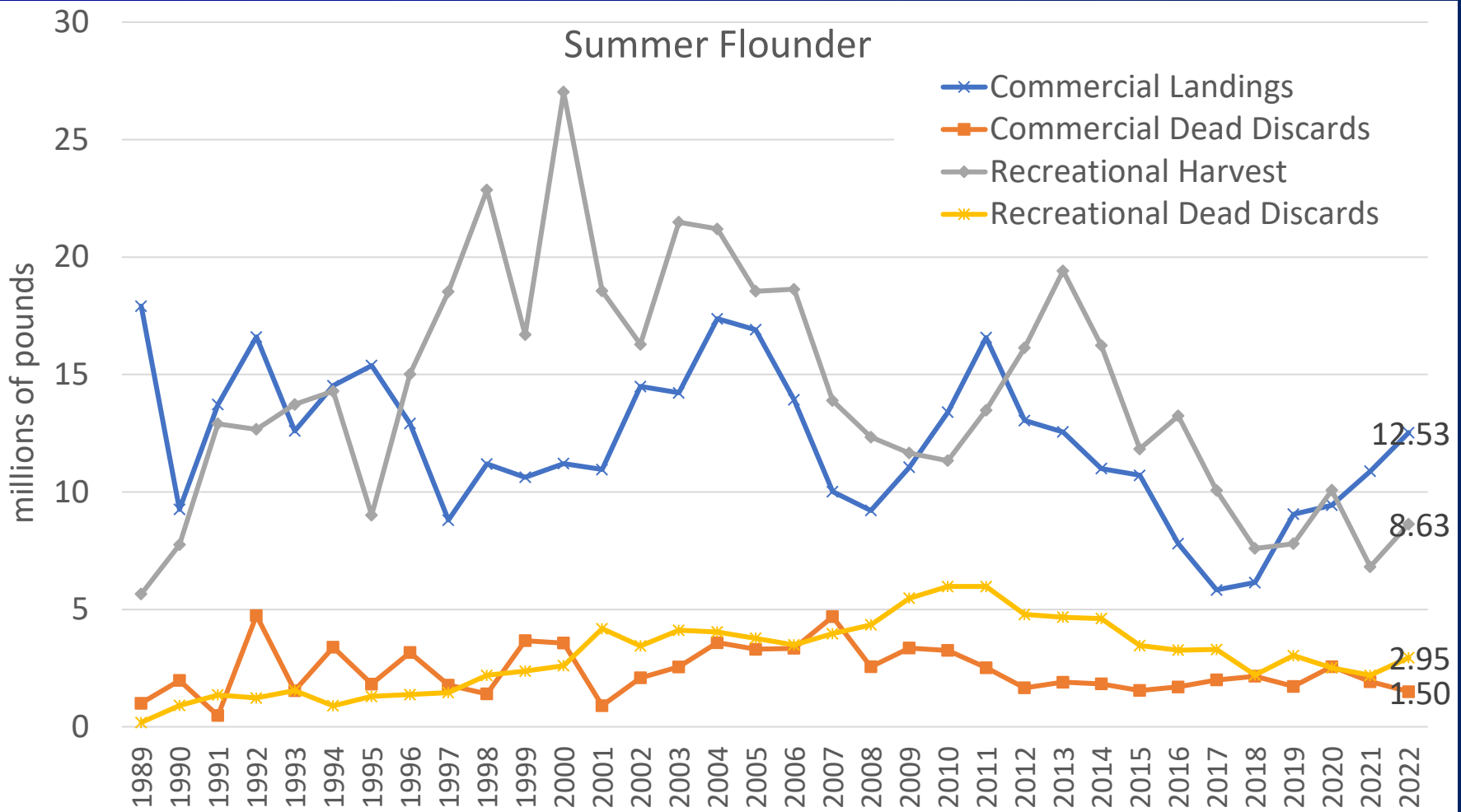
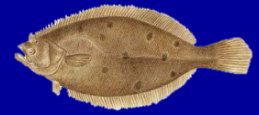
Total catch calculated using [old MRIP data through 2018](#)

Stock Status:

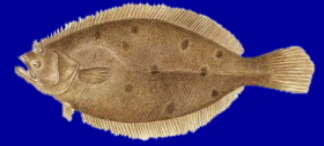
Monitoring Committee Comments

- Why overfishing and biomass/OFL declines despite not exceeding OFL in recent years?
- Projections from the previous MTA appear to have been overoptimistic
 - Minor retrospective pattern (overestimating SSB and underestimating F) compounded by adding 3 years of catch, survey, biological data
 - Overoptimistic estimation of 2018 year class contributed
- Changes in productivity over last ~decade
 - Declining mean length/weights at age for both sexes
 - Declining maturity at age (largest impact for age 1)
 - Recent 12-year period of low (but stable) recruitment

Fishery Landings & Discards 1989-2022

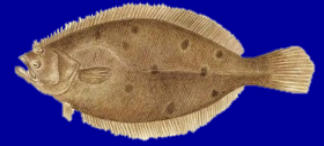


Recreational Fishery Performance



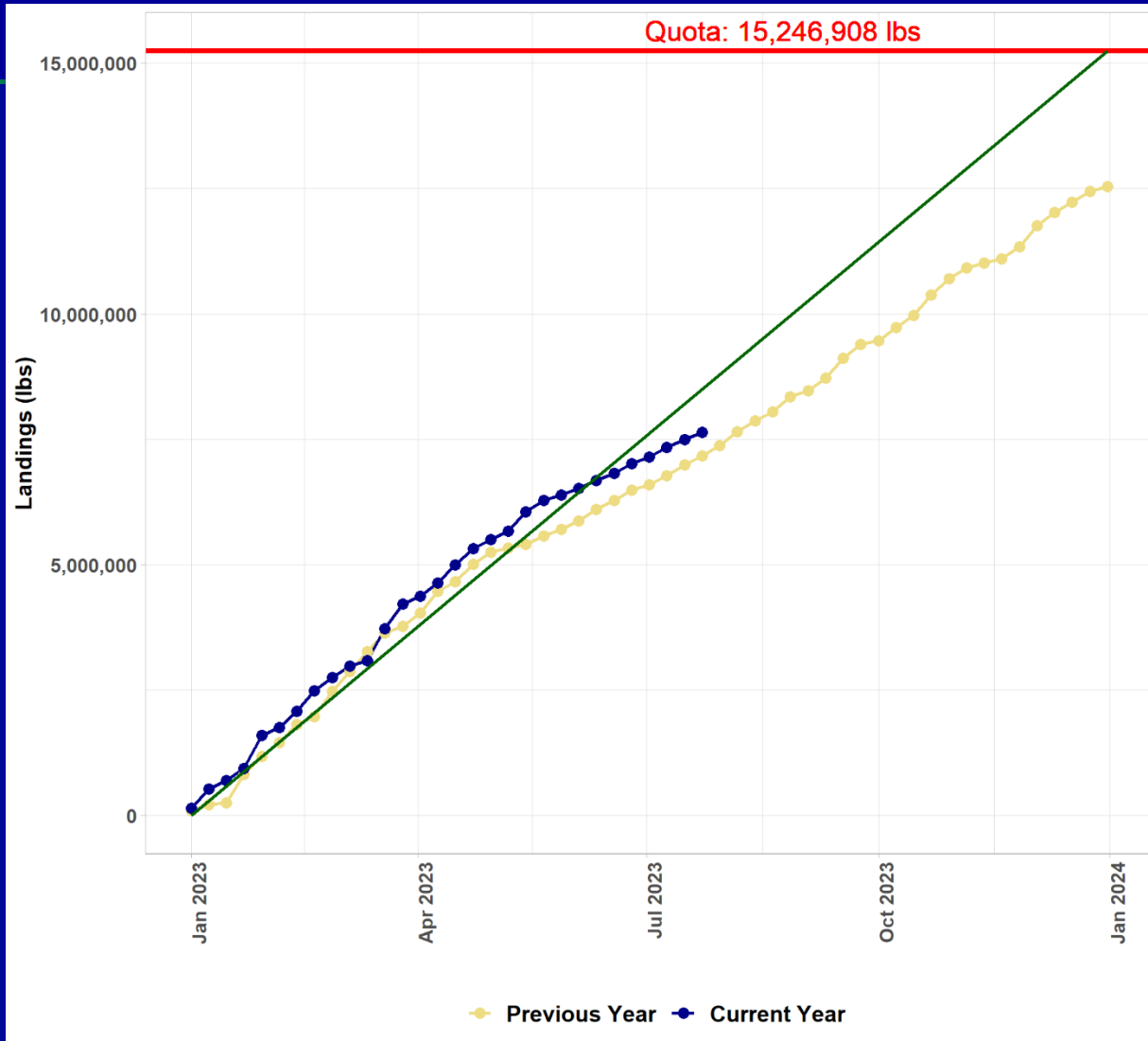
	MRIP version	Rec harvest	RHL	RHL over/under	Rec. dead disc.	Rec dead catch	ACL	ACL over/under
2018	OLD MRIP	3.35	4.42	-24%	0.97	4.32	5.53	-22%
2019	NEW MRIP	7.80	7.69	1%	3.04	10.84	11.51	-6%
2020		10.07	7.69	31%	2.52	12.60	11.51	9%
2021		6.82	8.32	-18%	2.20	9.02	12.48	-28%
2022		8.83	10.36	-17%	2.95	11.58	14.64	-21%
2023		--	10.62	--	--	--	--	14.90

Commercial Fishery Performance



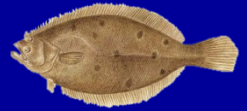
Year	Com. Land.	Com. quota	Quota over/under	Comm dead disc.	Com. dead catch	ACL	ACL over/under
2018	6.14	6.63	-7%	2.16	8.30	7.70	8%
2019	9.06	10.98	-17%	1.73	10.79	13.53	-20%
2020	9.44	11.53	-18%	2.56	12.00	13.53	-11%
2021	10.88	12.49	-13%	1.92	12.80	14.63	-13%
2022	12.53	15.53	-19%	1.50	14.03	18.48	-24%
2023	--	15.27	--	2.16	--	18.21	--

2023 Commercial Landings



Commercial landings through August 2, 2023

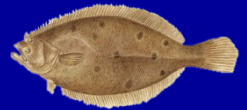
AP Fishery Performance Report



Fishery Performance

- Question about whether it's typical for catch to be $\sim 30\%$ below OFL on regular basis
- Request for information about F/F_{MSY}
- Struggle to understand conservation need for larger underages

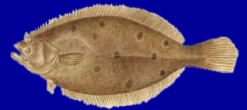
AP Fishery Performance Report



Stock Availability and Trends

- Underages due to “fishery controlling itself” – availability is down
 - Would be better to tighten regs for fluke and loosen for scup and BSB
 - Rec. fishermen still catching many fluke, but very few keepers
- Another advisor agreed stock is not as robust as we think
 - Would expect more stock growth with all of these underages
 - Questioned whether natural mortality is mis-specified

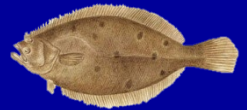
AP Fishery Performance Report



Stock Availability and Trends

- Commercial horseshoe crab harvester – normally sees 1-2 fluke per tow; this year getting many smaller 16-20 in, up to 50-70 pounds per tow
- NEAMAP bottom temp. observations 6-10 degrees colder than last 20 years, impacting seasonal availability of target species
 - Timing running about 2 weeks behind “typical” this year
- Suggestion to consider applying “Squid Squad” approach to linking oceanographic conditions to availability for summer flounder

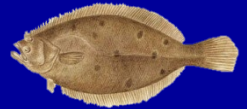
AP Fishery Performance Report



Market and Economic Issues

- Several reports of low prices this year
 - Town Dock (RI) reports terrible prices
 - MD advisor noted recent prices as low as \$0.46 per pound
- Low prices and high costs causing hardships for industry
- MA fisherman noted recent years have seen mostly medium fluke; few large and jumbos
 - However, this year seeing more large and jumbos again

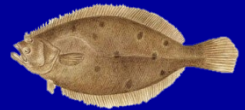
AP Fishery Performance Report



Recreational Management Issues

- Comments on NJ split slot limit (2 fish at 17-17.99 and 1 above 18")
 - One concerned it has not been successful in lowering harvest of female fish
 - Another supported slot but suggested some modifications to single slot or two slot limits with one fish bag in each
- One advisor supported further discussions on sector separation for the for-hire sector

AP Fishery Performance Report



Research Recommendations

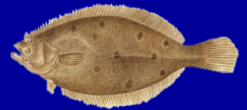
- Important to understand causes of center of biomass shift; does not believe it is explained by oceanographic changes
 - Could be related to asymmetric fishing pressure
- Need to know more about migration patterns of summer flounder beyond general East-West
- Find better, less destructive survey methods vs. bottom trawls
- Understand causes of recent low recruitment

AP Fishery Performance Report

General Comments on AP Participation

- Why is AP participation so low?
 - 12/24 MAFMC AP members and 3/31 ASMFC AP members on June 2023 webinar.
- Frustration that new data available after the AP meeting can negate AP input.
- Consider different/additional ways of collecting AP input
 - e.g., online survey before AP meetings, encourage greater discussion among AP members via email and phone in between meetings.
- Hold occasional in person meetings, just not in summer.
- Hold webinar meetings in the evenings.

AP Fishery Performance Report



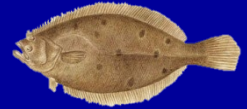
Email/Phone Comments (Summer Flounder)

- Recreational fishery not catching many because biomass is low – one of the worst years so far for fluke
- Price for fluke in NY was higher this year, but no one was catching them

Summer Flounder Specifications 2024-25:

- The SSC reviewed the results of a Level 2 MTA of the updated assessment through 2021.
- Stock is 83% Bmsy proxy; **fishing mortality is 103% of Fmsy proxy.**
- Review of OFL CV criterion (Attachment 3) suggested continuation of 60% for OFL CV (Attachment 6).
- **The SSC recommended ABCs of 8,111 mt in 2024 and 9,411 mt in 2025, respectively. If the Council should prefer to adopt a constant average ABC policy, an ABC of 8,761 mt for 2024 and 2025 would satisfy the Council's risk policy.**
- Recruitment has been below average and projections are based on observations from the last 12 years.
- Changes in life history characteristics: declining growth rates, maturity at age increasing, changing sex ratios.
- Potential environmental effects not quantified.

2024-2025 SSC ABC Recommendations in mil lb



- Council and Board should identify constant vs. varying ABCs for 2024-2025
 - MC recommends constant ABCs/catch limits/landings limits

	Varying				Constant			
	OFL (mt)	OFL (mil lb)	ABC (mt)	ABC (mil lb)	OFL (mt)	OFL (mil lb)	ABC (mt)	ABC (mil lb)
2024	10,422	22.98	8,111	17.88	10,422	22.98	8,761	19.32
2025	11,515	25.39	9,411	20.75	11,325	24.97	8,761	19.32

2024-2025 ACLs

Formulaic based on FMP allocation

	Varying		Constant
	2024	2025	2024-2025
ABC	17.88	20.75	19.32
Comm. ACL: 55% of ABC	9.84	11.41	10.62
Rec. ACL: 45% of ABC	8.05	9.34	8.69

MC Recommends 2024-2025 ACTs=ACLs

- Monitoring Committee recommended no deductions from ACL to ACT in either sector to account for management uncertainty

MC Recs: Commercial ACTs

- Commercial landings well monitored/ controlled; in-season closure authority; quota underages since 2018
- Larger ACL underages since 2019 (11-24%)
- Given recent trends in dead discards and lack of strong correlation between limits and dead discards, MC did not expect overages of dead discard projections for 2024-2025 despite catch limit reductions

MC Recs: Recreational ACTs

- Recreational fishery well under RHLs (17-18%) and ACLs (21-28%) in 2021 and 2022
- Use of Percent Change Approach and Rec. Demand Model new for 2023; no indication of performance yet
- Percent change in harvest needed for 2024-2025 under PCA not yet known
- MC did not expect issues with projected dead discards

MC Recs: Recreational ACTs


- MC raised the need to further explore relationship between rec. mgmt. uncertainty and the Percent Change Approach/its future replacement
- Percent Change Approach partially decouples bag/size/season from RHL and ACL, creating a disconnect with mgmt. uncertainty buffers
- Application of a mgmt. uncertainty buffer reduces RHL
 - Reduced RHL only impacts the outcome of the Percent Change Approach if it changes which of 3 categories is used for the upcoming specs cycle: Is the RHL within, above, or below a confidence interval around estimated harvest?
 - If category is unchanged, mgmt. uncertainty will have no impact on measures
- If mgmt. uncertainty results in more restrictive measures, could increase discards

MC rec. continued use of typical method for discard projections

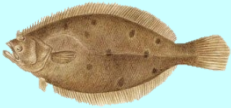
- Total projected 2024-2025 discards provided by NEFSC projections
- Split commercial/recreational using 3-yr moving avg. proportion of discards by sector
 - 2020-2022 discards were 56% from rec fishery; 44% from comm. fishery

	Commercial		Recreational	
2023	2.95		4.28	
2024 (staff. rec)	Annual 1.71	Avg. 1.83	Annual 2.18	Avg. 2.35
2025 (staff. Rec)	1.94	1.83	2.49	2.35

2023 and MC Recommended **CONSTANT** 2024-2025 Catch and Landings Limits (mil lb)

	2023	2024-2025	% change
OFL	34.98	22.98 (2024) 24.97 (2025)	-34% (to 2024)
ABC	33.12	19.32	-42%
Commercial ACL = ACT	18.21	10.62	-42%
Recreational ACL = ACT	14.90	8.69	-42%
Commercial Quota	15.27	8.79	-42%
Recreational Harvest Limit	10.62	6.35	-40%

2023 and MC Recommended **VARYING** 2024-2025 Catch and Landings Limits (mil lb)

	2023	2024	2025	% change (to 2024)
OFL	34.98	22.98	24.97	-34%
ABC	33.12	17.88	20.75	-46%
Commercial ACL = ACT	18.21	9.84	11.41	-46%
Recreational ACL = ACT	14.90	8.05	9.34	-46%
Commercial Quota	15.27	8.13	9.47	-47%
Recreational Harvest Limit	10.62	5.86	6.85	-45%

Note that commercial quotas are below 9.55 mil lb threshold for revised allocation

State	Existing Allocations		Revised Allocation System	
	Allocation (%)	Status Quo Quotas under 11.53 mil lb quota (2020)	Allocation of baseline quota ≤9.55 mil lb (%)	Allocation of additional quota beyond 9.55 mil lb (%)
ME	0.04756	5,484	0.04756	0.333
NH	0.00046	53	0.00046	0.333
MA	6.82046	786,399	6.82046	12.375
RI	15.68298	1,808,248	15.68298	12.375
CT	2.25708	260,241	2.25708	12.375
NY	7.64699	881,698	7.64699	12.375
NJ	16.72499	1,928,391	16.72499	12.375
DE	0.01779	2,051	0.01779	0.333
MD	2.03910	235,108	2.03910	12.375
VA	21.31676	2,457,822	21.31676	12.375
NC	27.44584	3,164,505	27.44584	12.375
Total	100	11,530,000	100	100

Commercial Measures and Ongoing Evaluation of Summer Flounder Mesh Regulations

MC Recommended No Changes to Commercial Measures for 2024

- Minimum fish size (14")
- Seasonal mesh size possession thresholds (200 lb Nov 1-Apr 30; 100 lb May 1-Oct 31)
- Minimum mesh size and exemption programs are pending further discussion after staff + contractor evaluation
 - No changes for 2024 to minimum mesh size, Small Mesh Exemption Program, and Flynet Exemption
 - MC will review later in 2023 for Council and Board consideration in December
 - If modified, would likely be effective 2025 or later

Minimum Mesh Size

- Current requirement: 5.5" diamond or 6.0" square
- Mesh size study (Hasbrouck et al. 2018) results indicate 5.5" diamond/6.0" square may not be equivalent
 - 6.0" square appears closer to 5.0" diamond
 - Some past MC concern about retention of undersized fish with 6.0" square; recommendation to evaluate possible phase out of 6.0" square option

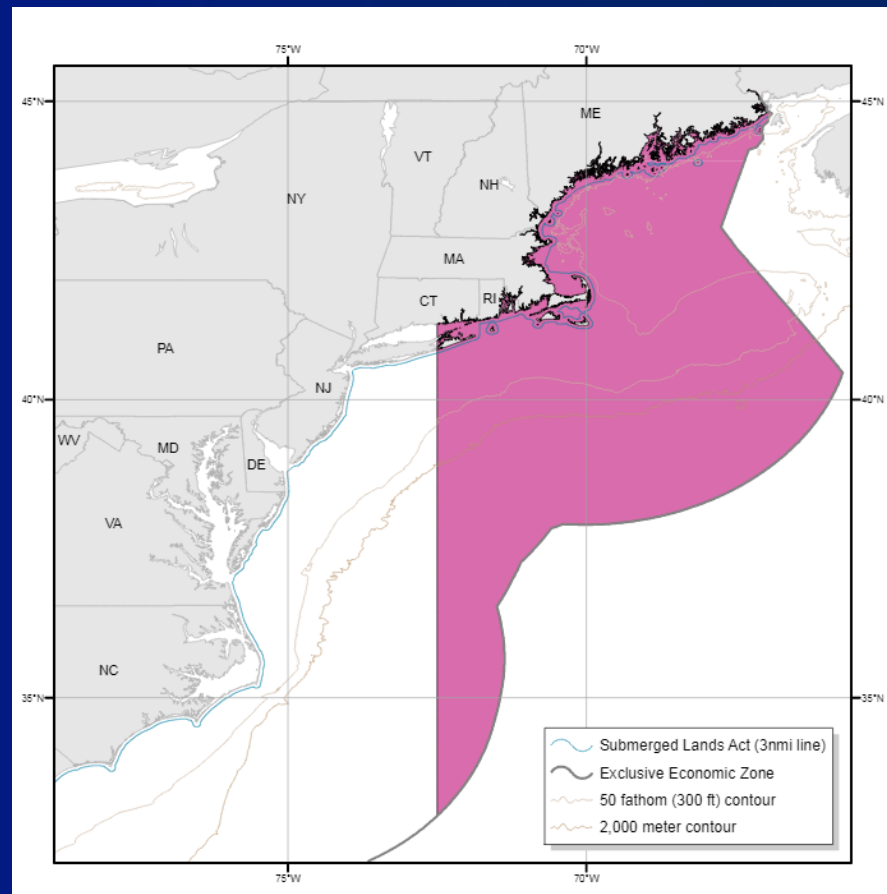
Staff is Evaluating Minimum Mesh Size for Council/Board Review in Dec.

- Potential analysis questions informed by previous MC conversations:
 - Extent of use of 6" square vs. 5.5" diamond?
Characterize this use by area, fishery/fleet, vessel type, circumstances, etc.?
 - Is a square mesh regulation still needed/how to identify?
 - Biological benefits of phasing out 6" mesh?
 - Industry perspectives?
 - Length of an appropriate phase out period?
 - Costs to industry of changing mesh sizes?

Small Mesh Exemption Program:

Under Review by a Contractor for Council/Board Review in Dec.

- SMEP allows authorized small mesh vessels to land more than 200 lb of summer flounder east of longitude 72° 30.0'W, Nov. 1 - April 30
- FMP requires review of observer data to determine whether these vessels are discarding more than 10% of their summer flounder catch



Preliminary Questions/Analysis

Under Review by a Contractor for Council/Board Review in Dec.

- What was the original intention of the regulation and how is that being served today?
- Are changes to the SMEP needed relative to the area, timing, possession limit, or other?
- How are vessels using the exemption and in which fisheries? Has use of the exemption program changed over time?
- What are industry perspectives and recommendations on the exemption program?
- Is the extent of summer flounder discards under this exemption a problem?
- Is the exemption program still needed?

Flynet Exemption

Under Review by a Contractor for Council/Board Review in Dec.

- Vessels fishing with two-seam otter trawl flynet are exempt from the minimum mesh size requirements.
 - Exempt flynets have large mesh in the wings that measure 8 to 64 inches, the belly of the net has 35 or more meshes that are at least 8 inches, and the mesh decreases in size throughout the body of the net, sometimes to 2 inches or smaller.
- NC flynet fishery analyzed annually
- No summer flounder landed in NC flynet fishery in last 8 years; general decrease in all flynet landings due to shoaling at Oregon Inlet

Flynet Exemption

Under Review by a Contractor for Council/Board Review in Dec.

- Previous MC and Council/Board discussion that flynet exemption is being used outside NC with 4-seam “high rise” nets on multispecies trips (do not meet definition in exemption regulations)
- Advisor request for change in definition to include 4-seam nets in addition to 2-seam nets
- MC previously recommended further exploration of this potential compliance/enforcement issue

Flynet Exemption Questions

Under Review by a Contractor for Council/Board Review in Dec.

- What was the original intention of the regulation and how is that being served today?
- Better understand the use and configuration of 2-seam otter trawl flynet and 4-seam high-rise trawl nets as they relate to this exemption
- What are industry perspectives and recommendations on the exemption?


MC Recommendations: Commercial Measures

- No changes for 2024-2025* to:
 - Commercial minimum fish size
 - Possession thresholds for minimum mesh size requirement
 - Commercial minimum mesh size
 - Mesh size exemptions (small mesh exemption program and flynet exemption)
 - MC and Council/Board will discuss min. mesh size and exemptions in more detail later this fall
- *Pending these discussions, changes adopted as result could be effective in 2025 or later

Decision Points

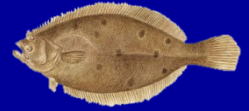
- Adopt 2024-2025 ACLs, ACTs, commercial quotas, and RHLs
 - Under ABC constant or varying approach
- Review commercial measures and adopt changes if warranted
 - Commercial minimum fish size
 - Minimum mesh size and exemptions
 - Seasonal possession limits triggering minimum mesh requirement
- Offer any feedback/guidance on evaluation of summer flounder mesh regulations as appropriate

Summary: Current (2023) and MC Recommended 2024-2025 Catch and Landings Limits (mil lb)

	Current	Varying		Constant (MC preferred)
	2023	2024	2025	2024-2025
OFL	34.98	22.98	24.97	22.98 (2024) 24.97 (2025)
ABC	33.12	17.88	20.75	19.32
Commercial ACL = ACT	18.21	9.84	11.41	10.62
Recreational ACL = ACT	14.90	8.05	9.34	8.69
Commercial Quota	15.27	8.13	9.47	8.79
Recreational Harvest Limit	10.62	5.86	6.85	6.35

BACKUP

SSC Recommendations



Varying 2024-2025 ABCs

	OFL Total Catch - mt	ABC Total Catch - mt	ABC F	ABC P* value	SSB - mt	SSB/SSB _{MSY}
2023	15,867	15,023	0.622	0.461	37,233	75%
2024	10,422	8,111	0.338	0.326	40,439	82%
2025	11,515	9,411	0.358	0.358	42,452	86%

Constant 2024-2025 ABCs

	OFL Total Catch - mt	ABC Total Catch - mt	ABC F	ABC P* value	SSB - mt	SSB/SSB _{MSY}
2023	15,867	15,023	0.622	0.461	37,233	75%
2024	10,422	8,761	0.369	0.377	39,908	81%
2025	11,325	8,761	0.336	0.322	42,380	86%

Percent Change Approach

RHL vs Harvest Estimate	B/B_{MSY}	Change in Harvest
Future 2-year avg RHL > upper bound of harvest estimate CI (harvest expected to be lower than RHL)	Very high ($\geq 150\%$)	Liberalization % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 40%</u>
	High (100 – 150%)	Liberalization % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 20%</u>
	Low ($< 100\%$)	10% liberalization
Future 2-year avg RHL within harvest estimate CI (harvest expected to be close to RHL)	Very high ($\geq 150\%$)	10% liberalization
	High (100 – 150%)	No change
	Low ($< 100\%$)	10% reduction
Future 2-year avg RHL < lower bound of harvest estimate CI (harvest expected to exceed RHL)	Very high ($\geq 150\%$)	10% reduction
	High (100 – 150%)	Reduction % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 20%</u>
	Low ($< 100\%$)	Reduction % = difference between harvest estimate and 2-yr avg RHL, <u>not to exceed 40%</u>

Comm/Rec Allocation

Previous (through 2022)

- 60% commercial/40% recreational applied to total allowable landings

New (2023)

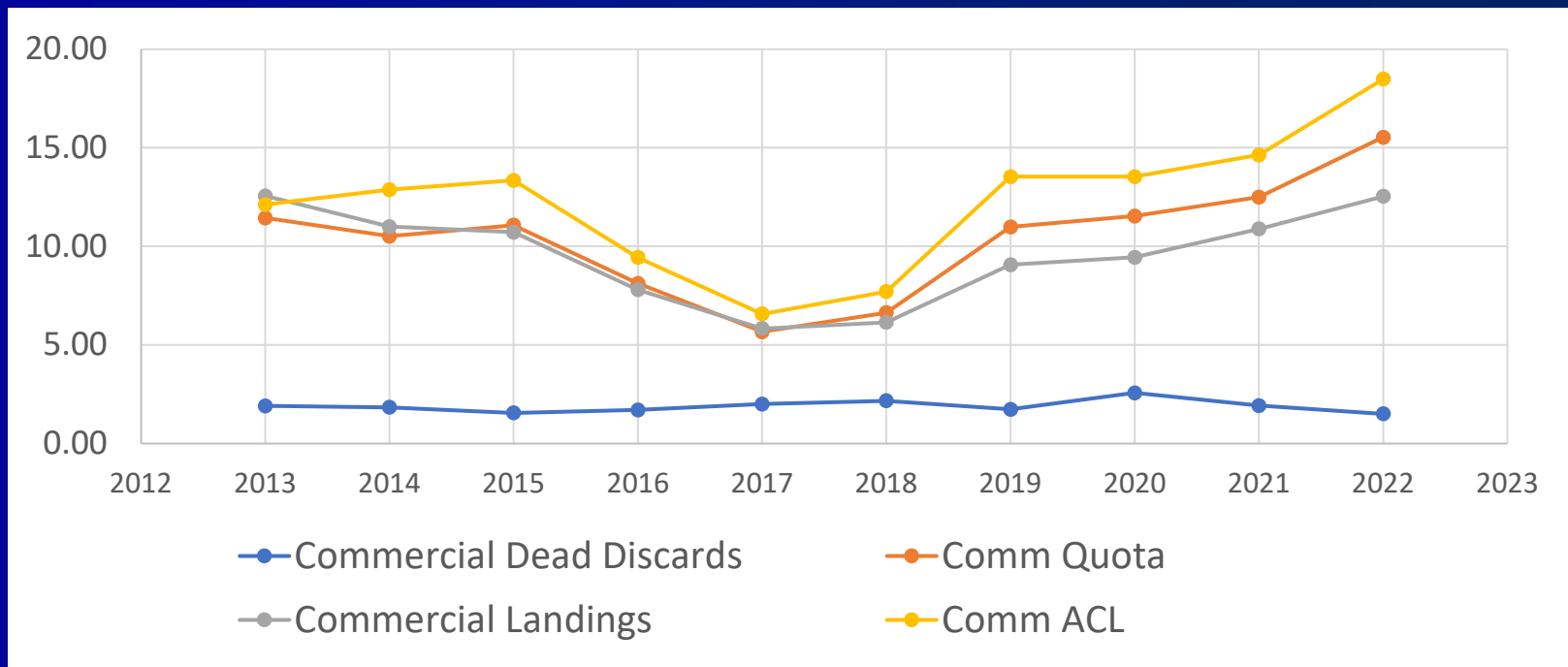
- 55% commercial/45% recreational applied to Acceptable Biological Catch

MC Recs: Discard Projections to Derive Comm. Quota and RHL

- Last year MC considered several different approaches
 - Regression approach: lack of strong correlation for summer flounder
 - Simple 3-year average: concern that recent averages would not reflect upcoming conditions
 - Typical approach total projected discards (from ABC projections from NEFSC) divided based on 3-yr moving avg. proportion by sector

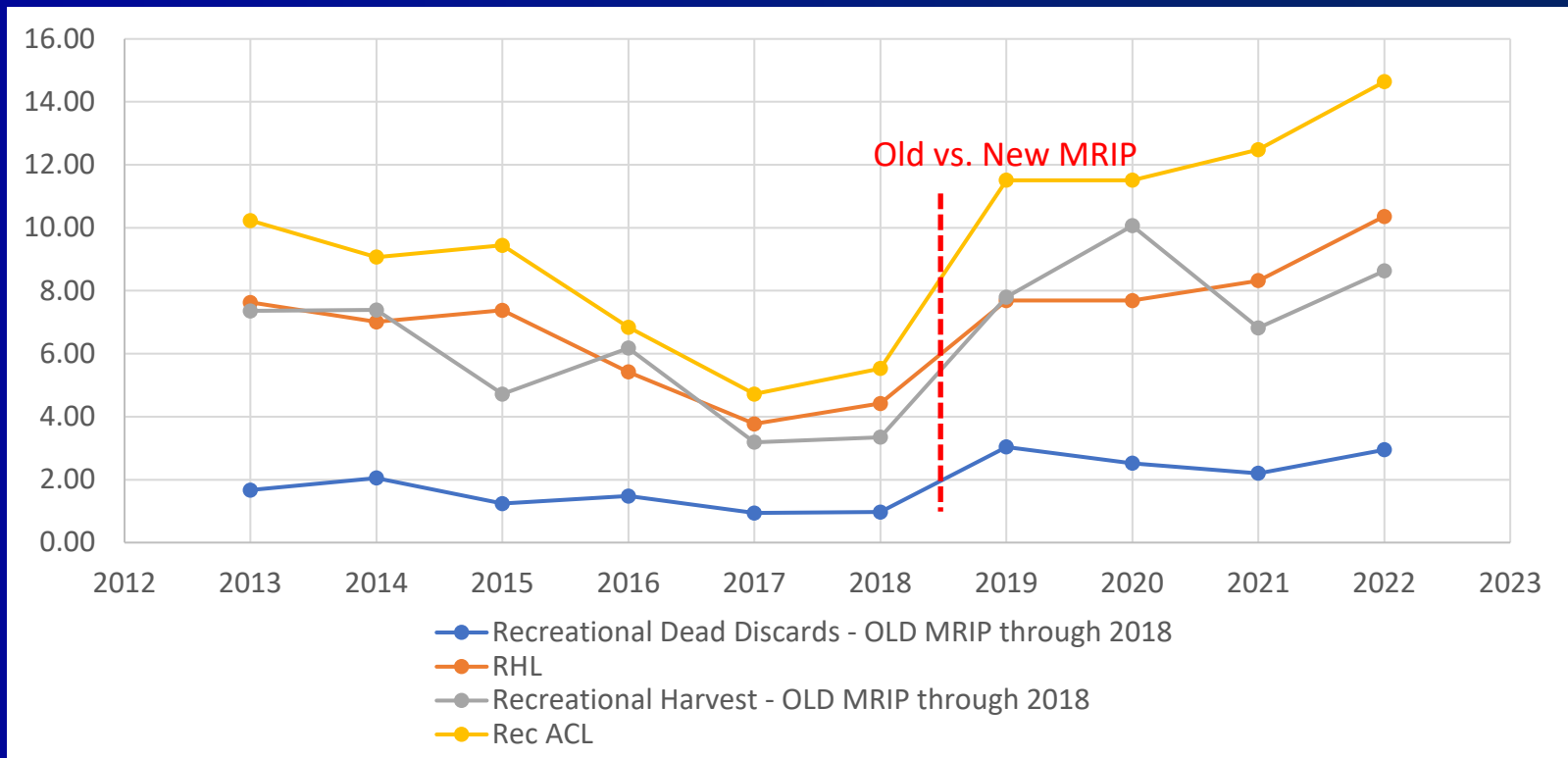
Commercial Dead Discards

- Not strongly correlated with limits or landings



Recreational Dead Discards

- Not strongly correlated with limits or landings



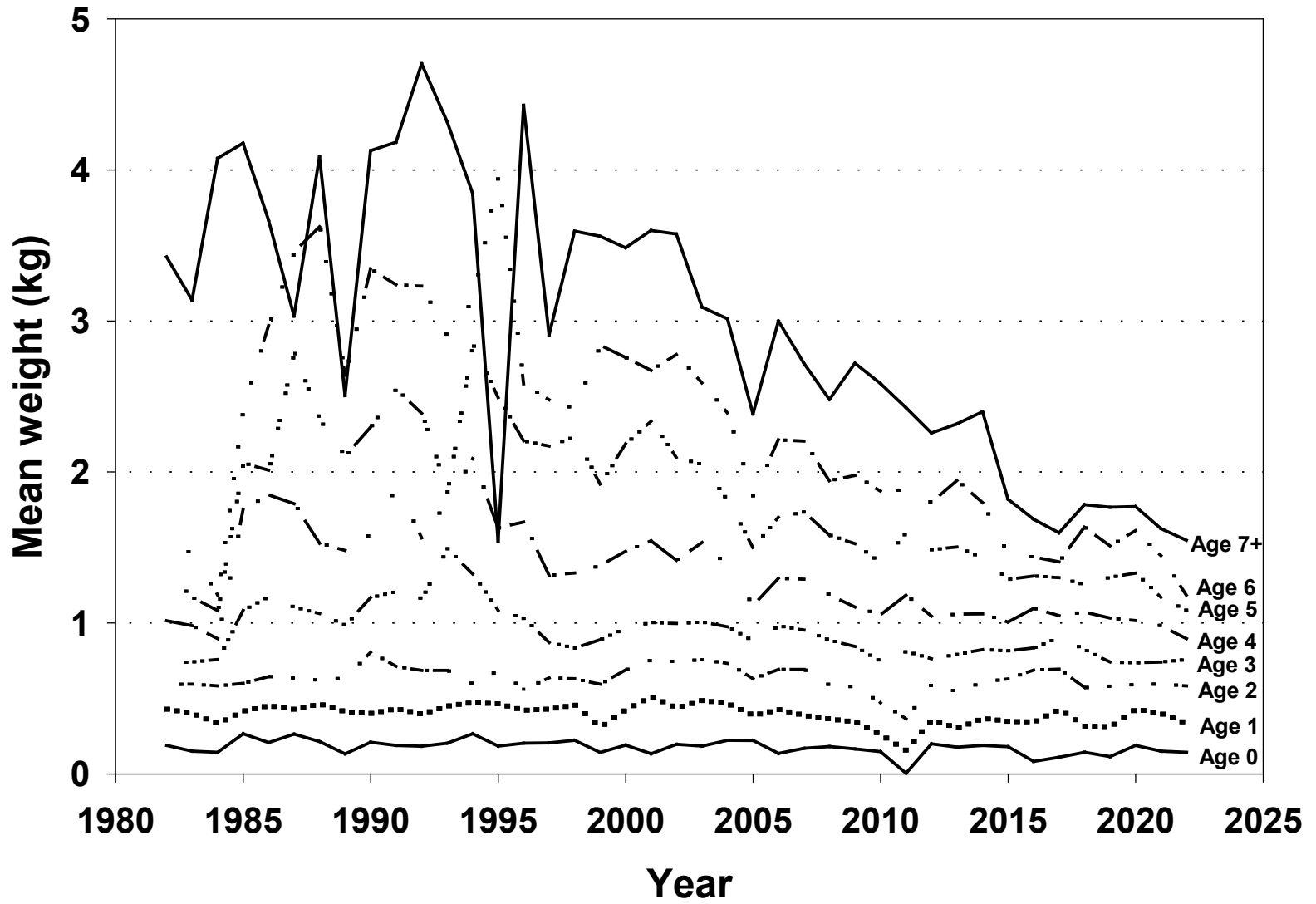
Comm. Discard Projection Performance

	Projected comm. Discard (mil lb)		Comm. Dead Discard Estimates (mil lb)	% difference
2015	2.27		1.55	-32%
2016	1.31		1.70	+30%
2017	0.92		2.00	+117%
2018	1.07		2.16	+102%
2019	2.00		1.73	-14%
2020	2.00		2.56	+28%
2021	2.14		1.92	-10%
2022	2.95		1.50	-49%
2023	2.95		--	--
2024 (staff. rec)	Annual 1.71	Avg. 1.83	--	--
2025 (staff. Rec)	1.94	1.83	--	--

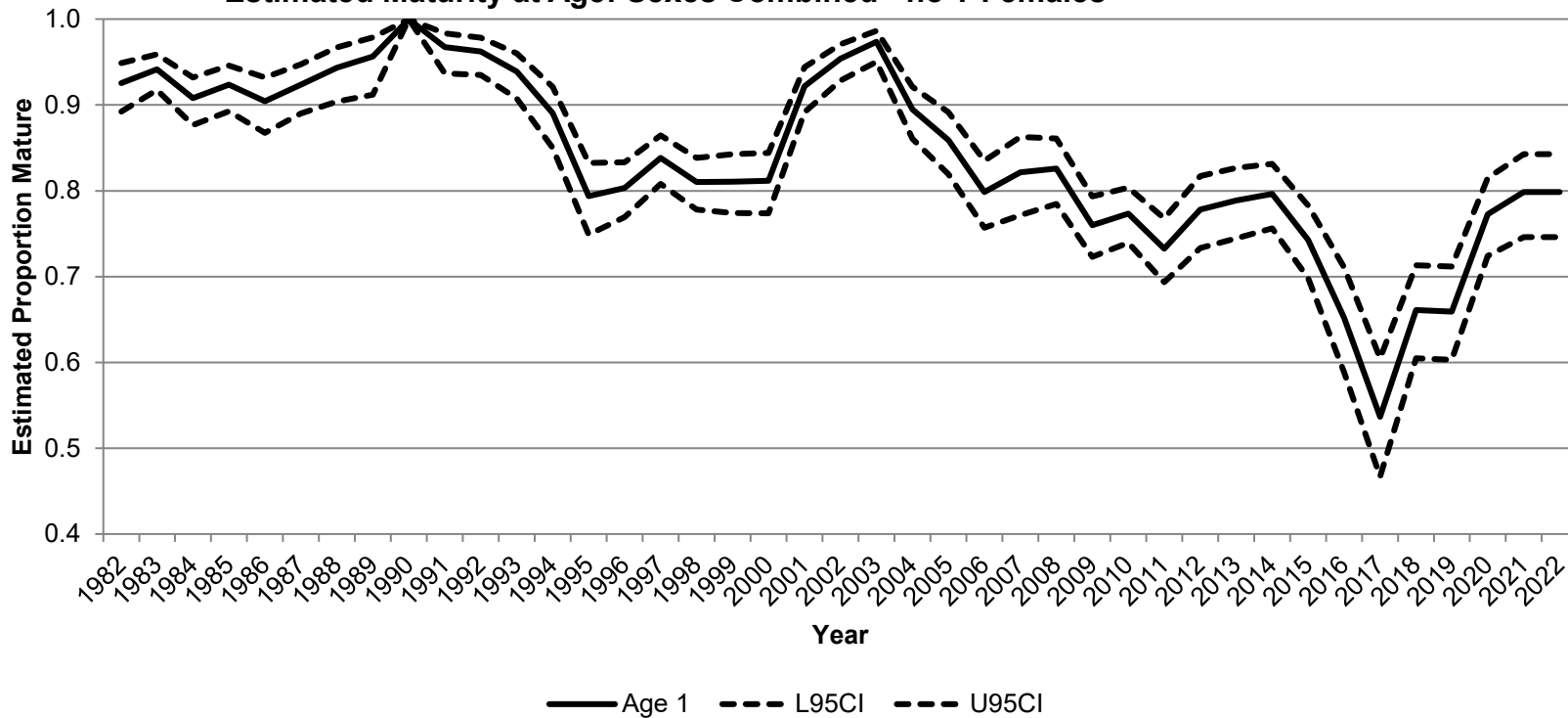
Commercial Discards

	SBRM	CAMS	C-S	%
2018	979	1183	+204	+21%
2019	783	892	+109	+14%
2020	816	1163	+347	+43%
2021	940	873	-67	-7%

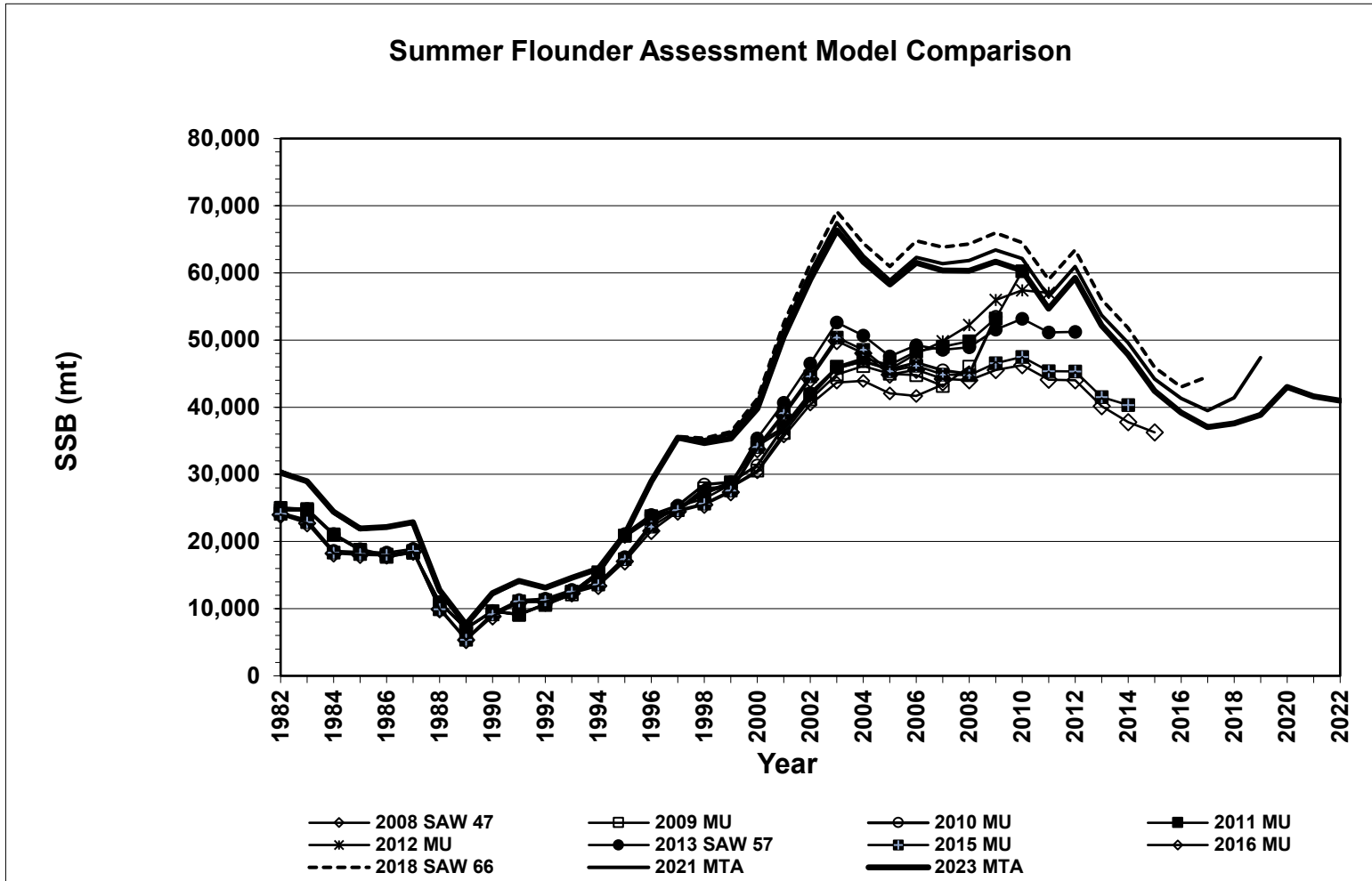
Summer flounder Total Catch Mean Weights at Age



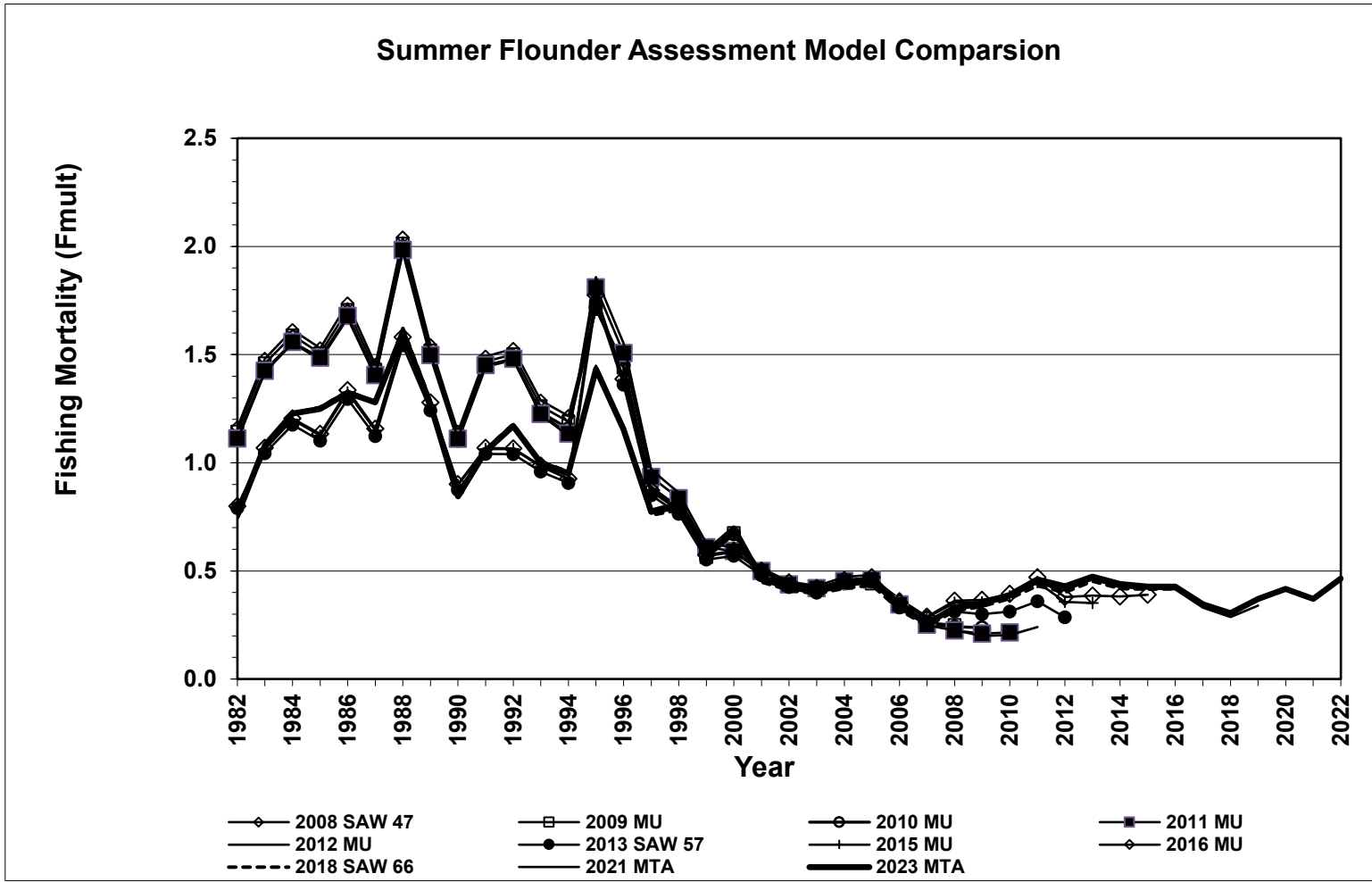
NEFSC Fall Survey: 3-yr window
Estimated Maturity at Age: Sexes Combined - no T Females



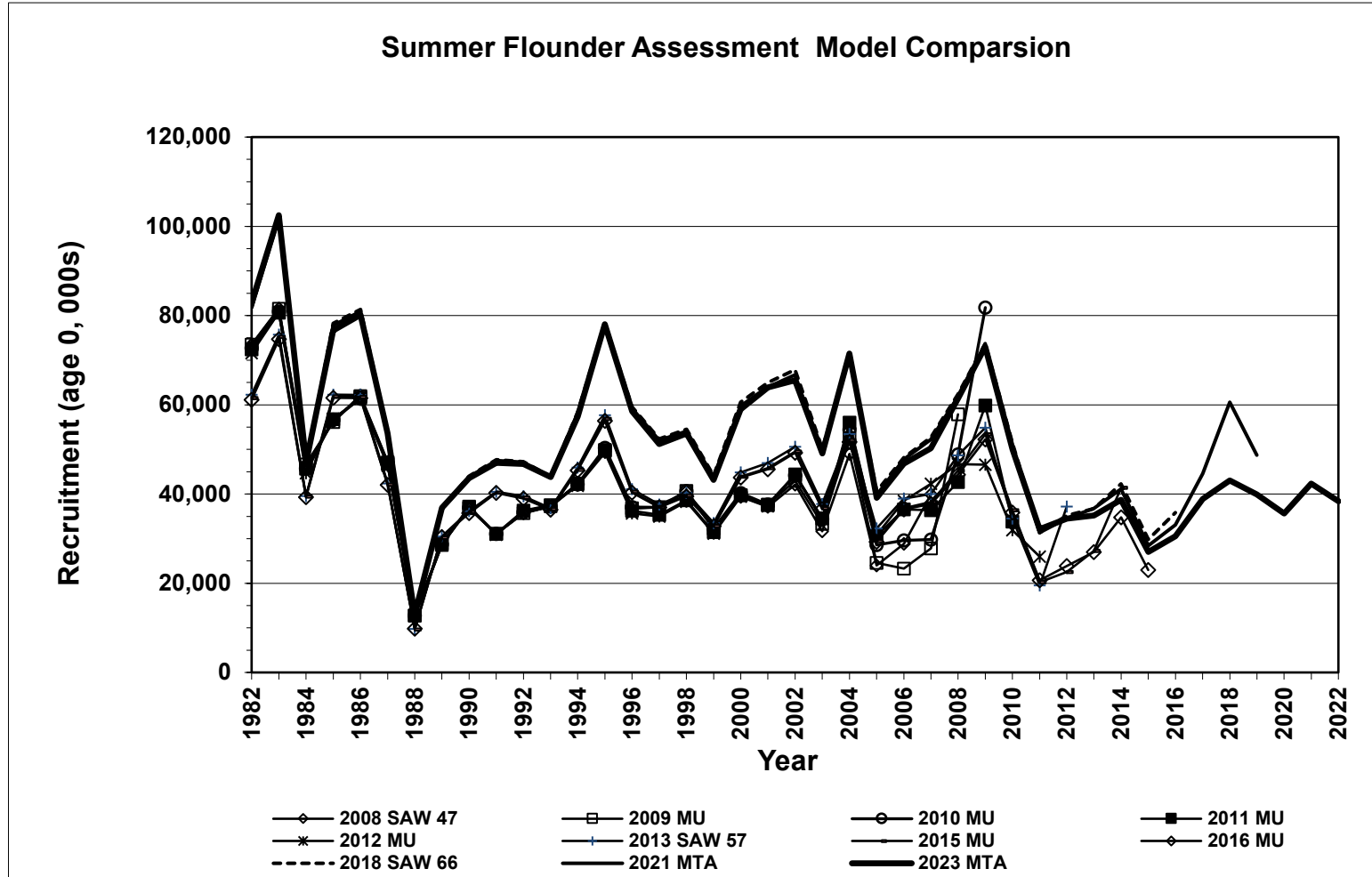
ASAP Assessments 2008-2023



ASAP Assessments 2008-2023

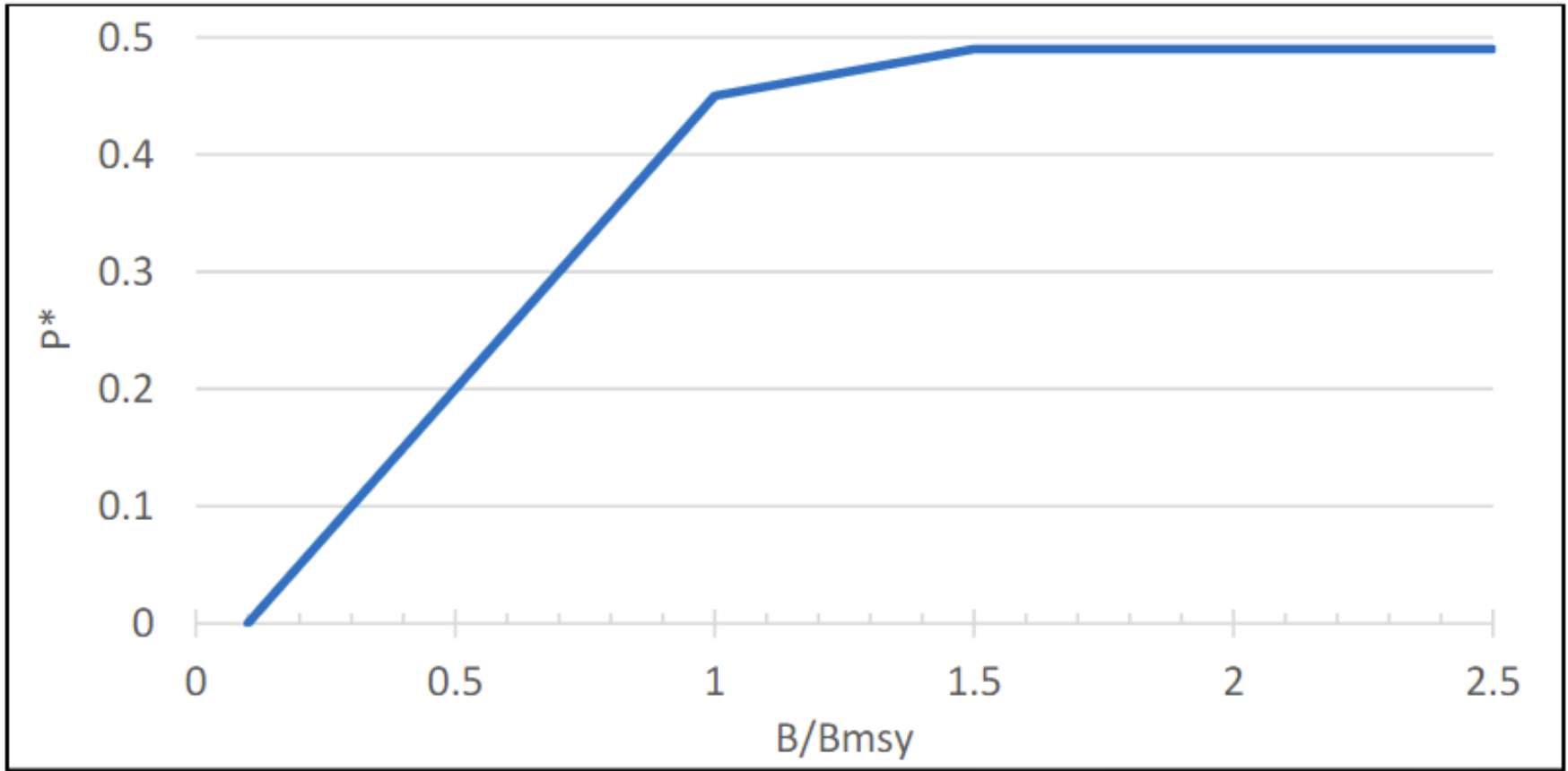


ASAP Assessments 2008-2023

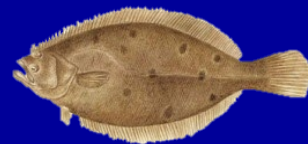


- **2021 Management Track Assessment: through 2019**
- **Recruitment sampled from 1982-2019: avg = 53 million**
- **BMSY = SSB35% = 55,217 mt**
- **FMSY = F35% = 0.422**
- **MSY = 15,872 mt = 34.992 mlb**
- **Not Overfished: SSB2019 = 47,397 mt, 86% of BMSY**
- **Not Overfishing: F2019 = 0.340, 81% of FMSY**

- **2023 Management Track Assessment: through 2022**
- **Recruitment sampled from 1982-2022; avg = 51 million**
- **BMSY = SSB35% = 49,561 mt**
- **FMSY = F35% = 0.451**
- **MSY = 14,097 mt = 31.079 mlb**
- **Not Overfished: SSB2022 = 40,994 mt, 83% of BMSY**
- **Overfishing is occurring: F2022 = 0.464, 103% of FMSY**



Stock Status: 2021 Management Track Assessment



SSB

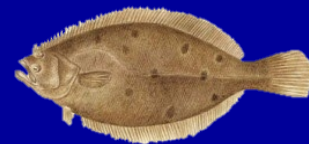
- Not overfished in 2019
- 2019 SSB = 47,397 mt, 86% of SSB_{MSY} = 55,217 mt

F

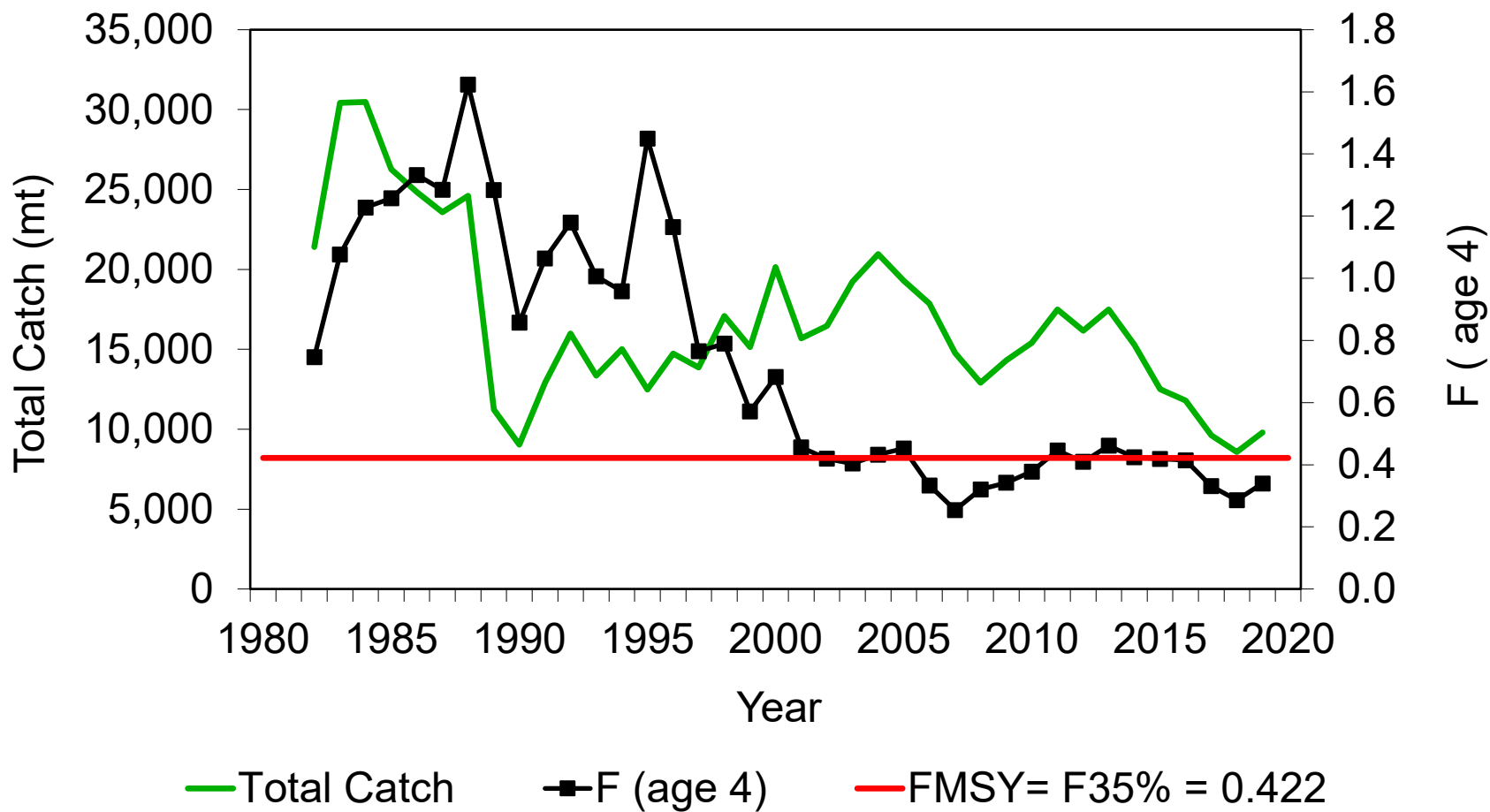
- Overfishing not occurring in 2019
- 2019 $F = 0.340$, 81% of F_{MSY} proxy = 0.422

Fishing Mortality

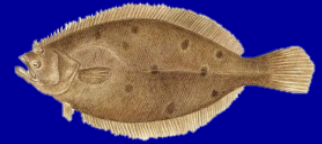
2021 MTA



Total Catch and Fishing Mortality (F)



SSB and Recruitment 2021 MTA



Spawning Stock Biomass (SSB) and Recruitment (R)

