

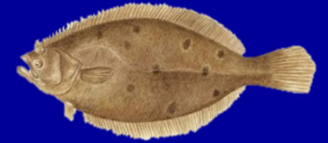


Summer Flounder



Council and Board
2022-2023 Specifications
August 9, 2021

Overview



- Review:
 - 2021 Management Track Assessment results
 - Recent fishery performance
 - Advisory Panel Fishery Performance Report
 - SSC recommendations (Dr. Rago)
 - Monitoring Committee recommendations
- Council and Board Objectives:
 - Adopt recommendations for 2022-2023 ACLs, ACTs, comm. quotas, and RHLs
 - Review commercial management measures and recommend changes for 2022 if warranted

Stock Status: 2021 Management Track Assessment



SSB

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

F

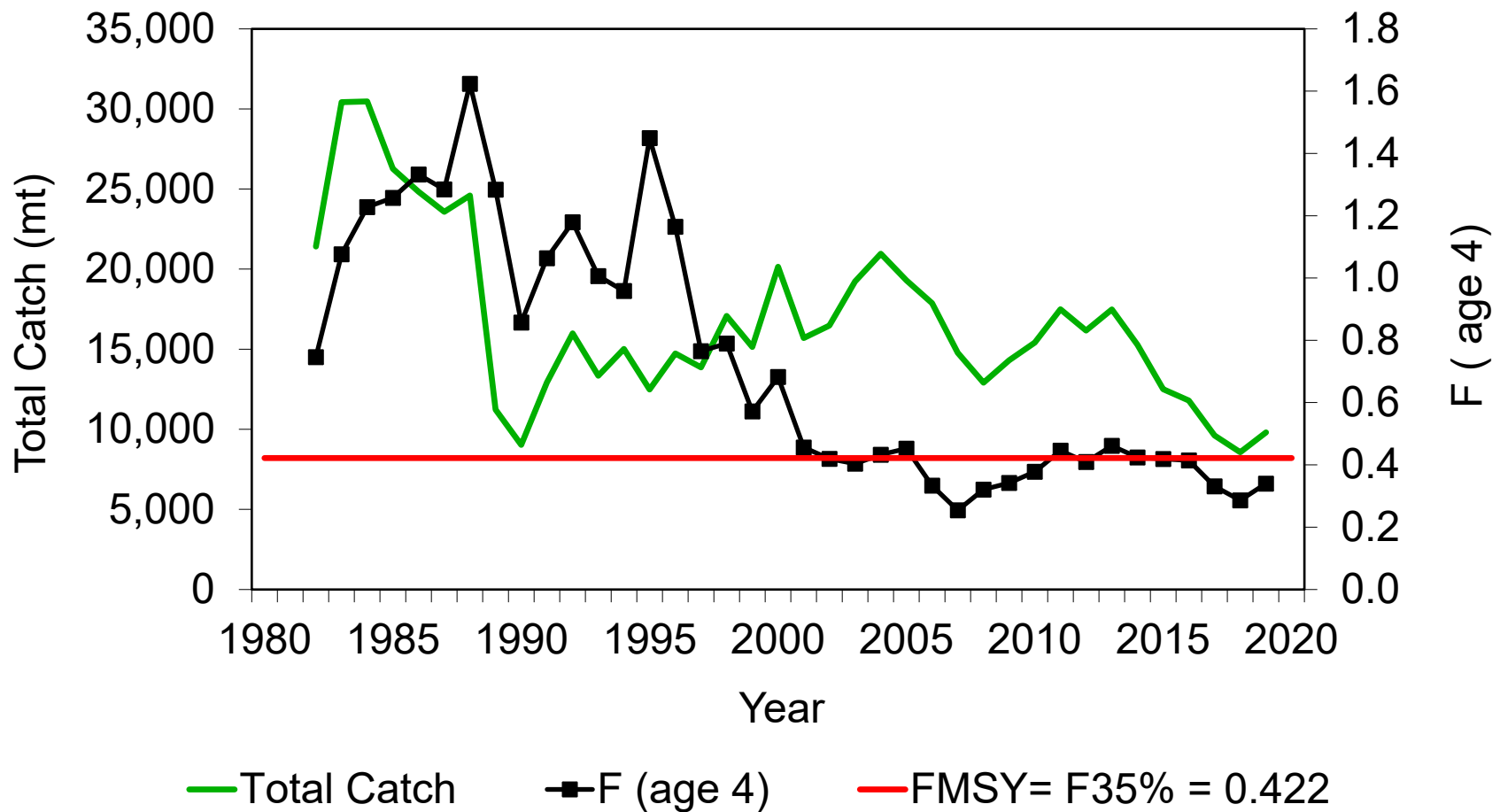
- Overfishing not occurring in 2019
- 2019 $F = 0.340$, 81% of F_{MSY} proxy = 0.422

Fishing Mortality

2021 MTA



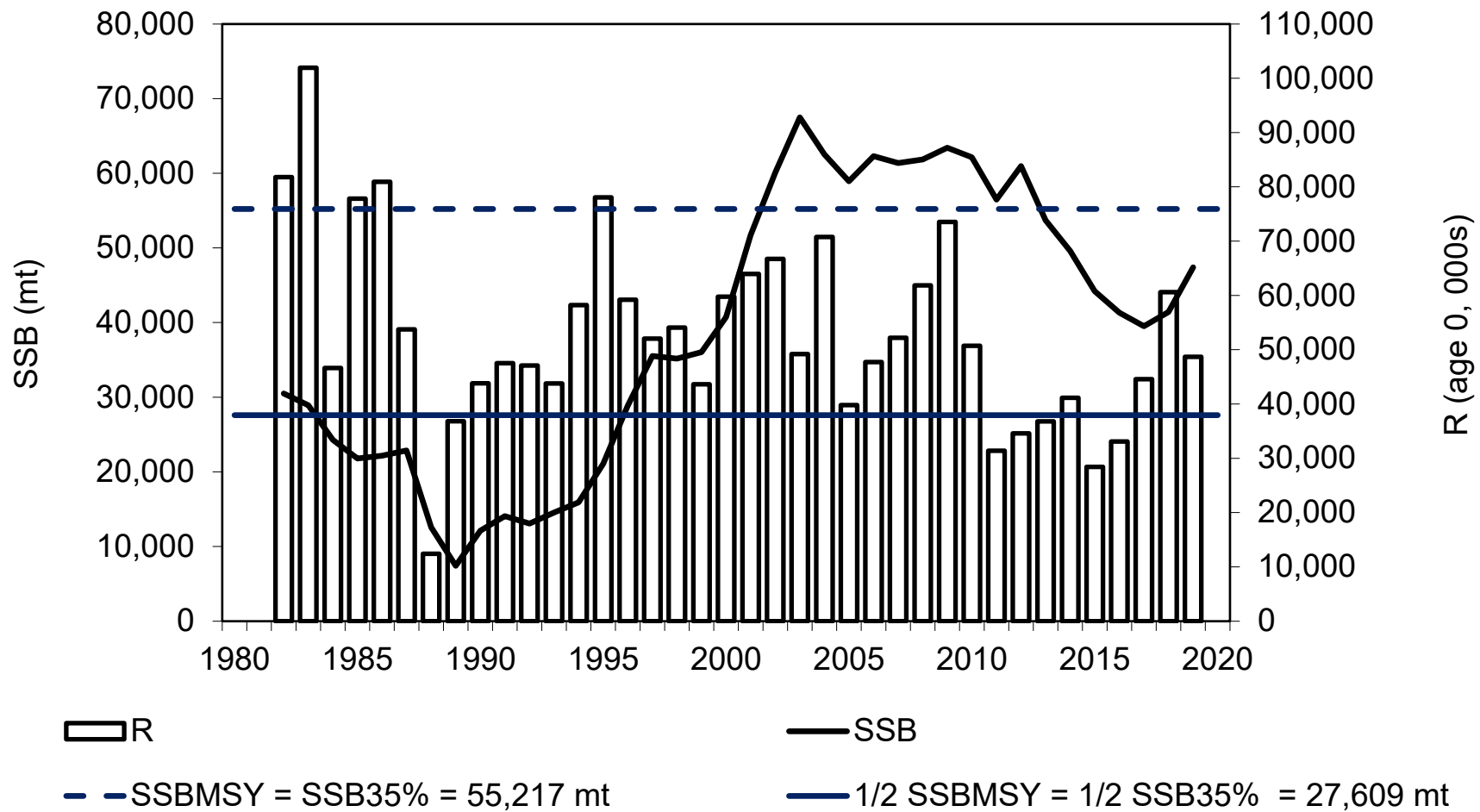
Total Catch and Fishing Mortality (F)



SSB and Recruitment 2021 MTA



Spawning Stock Biomass (SSB) and Recruitment (R)



COVID Related 2020 Data Gaps: Commercial

- Commercial effort/markets affected, but commercial landings data collection continued as normal
- Commercial dead discard estimates for 2020 unavailable due to suspension of observer program (mid-March through mid-August 2020)
- Unclear at this time if other methods will be used to generate 2020 dead discard estimates

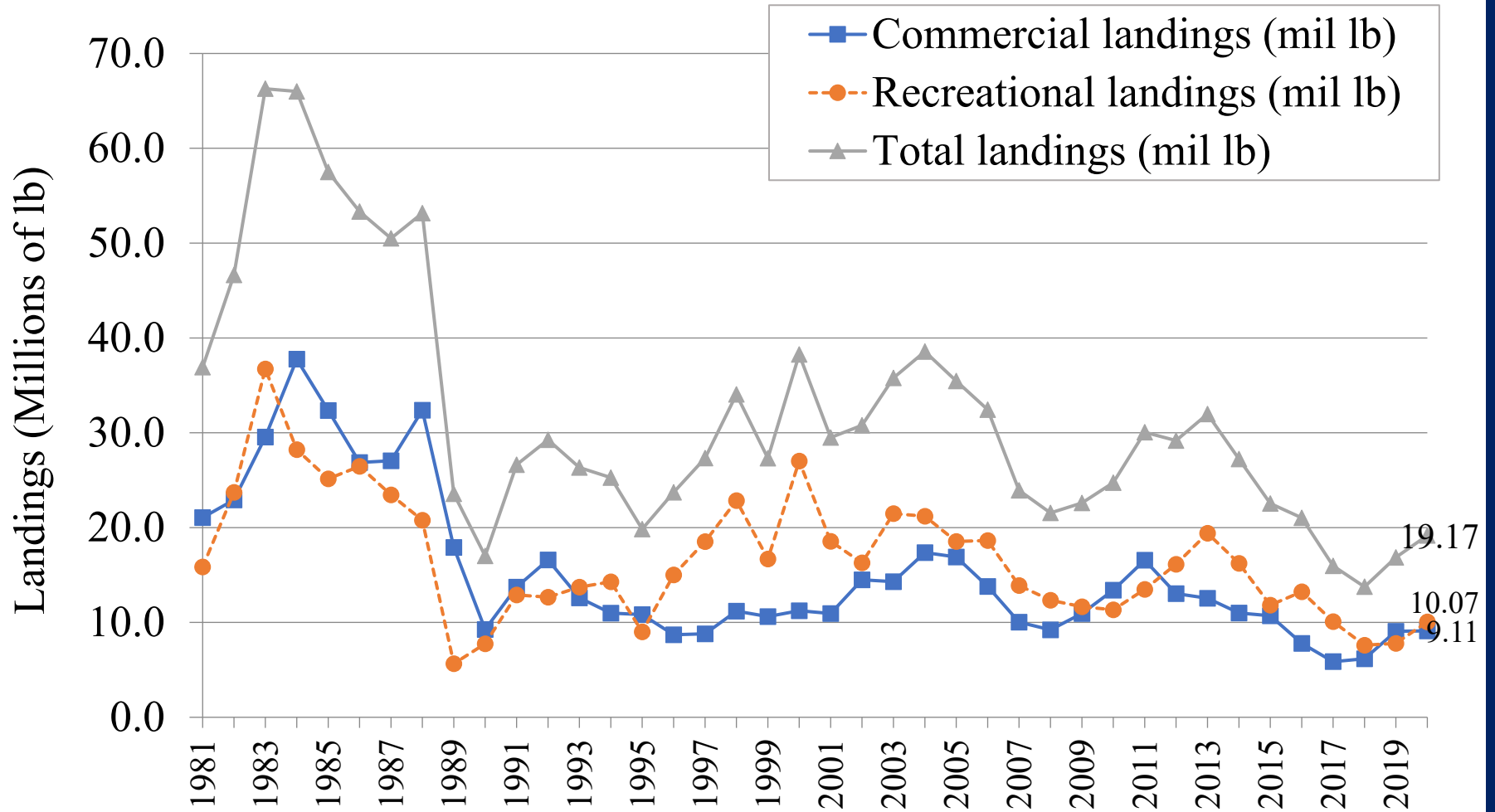
COVID Related 2020 Data Gaps: Recreational

- Effort data collection proceeded as normal
- APAIS (shoreside intercept) sampling disrupted in all states in March or April 2020
 - Length of disruption varied by state and wave
 - All states fully resumed APAIS sampling by August
 - At-sea headboat sampling still suspended in all states

COVID Related 2020 Data Gaps: Recreational

- MRIP developed 2020 estimates by filling in gaps with proxy data from 2018-2019
 - Matching the time, place, mode of missing data from 2020
- Observed data + proxy data used to generate estimates using standard estimation methodology
- Adjustments to 2020 estimates may occur once 2021 data are available (MRIP will review methods that use 2021 data)
- Recreational dead discard estimates in weight currently unavailable for 2020

Fishery Landings 1981-2020



Fishery Performance

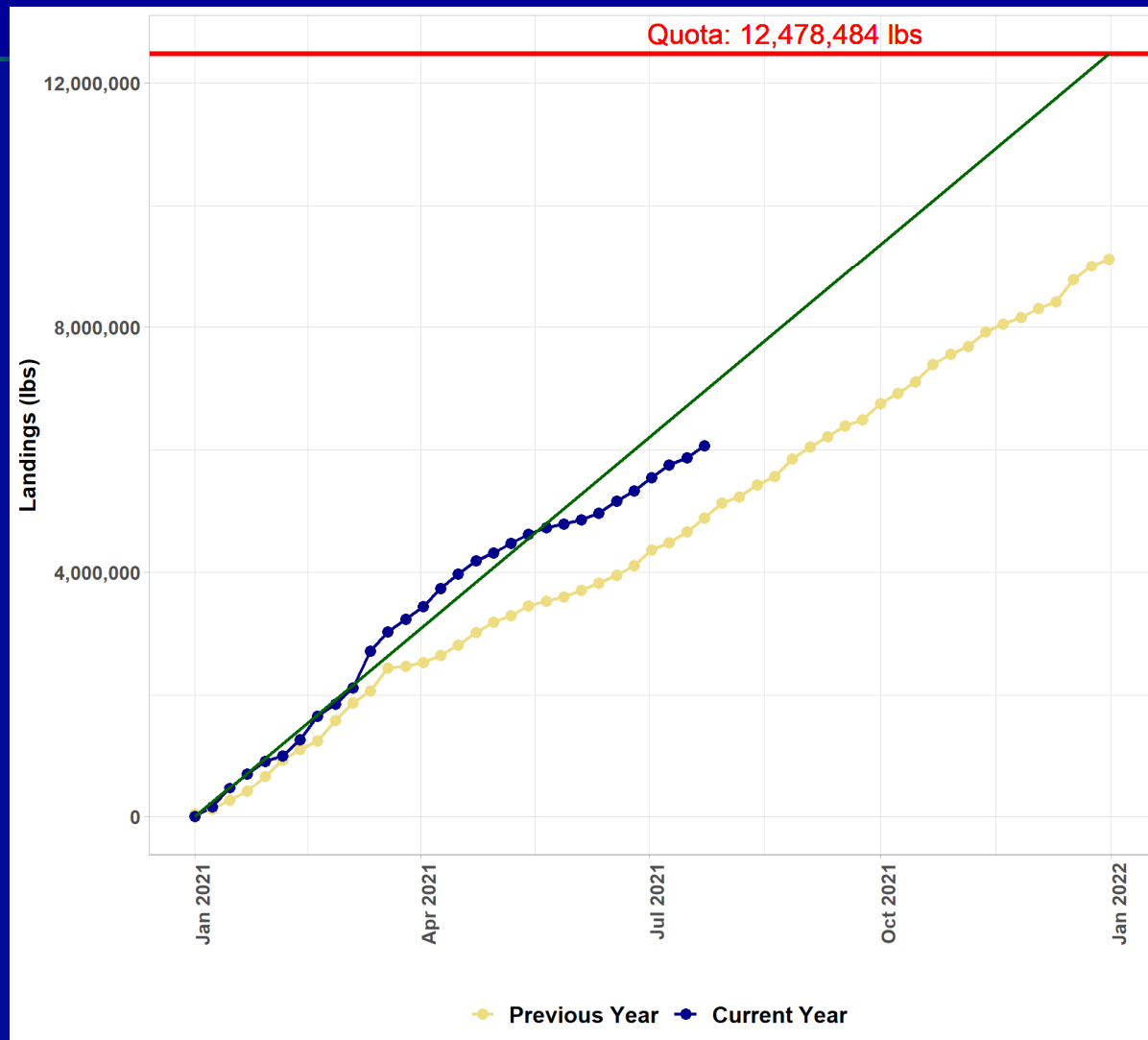


Year	Comm. Land. (mil lb)	Comm. Quota (mil lb)	Comm. % Over/ Under	Rec. Harvest – OLD MRIP (mil lb)	Rec. Harvest – NEW MRIP (mil lb)	RHL (mil lb)	Rec. % Over/ Under ^a
2016	7.81	8.12	-4%	6.18	13.24	5.42	+14%
2017	5.83	5.66	+3%	3.19	10.06	3.77	-15%
2018	6.14	6.44	-5%	3.35	7.60	4.42	-24%
2019	9.06	10.98	-17%	--	7.80	7.69	+1%
2020	9.11	11.53	-21%	--	10.06 ^b	7.69	+31%
Avg.			-9%				+7%

^a 2015-2018 evaluated using old MRIP data; 2019-2020 with revised MRIP data

^b 2020 harvest estimated using imputation methods with 2018-2019 data in addition to limited 2020 data

2021 Commercial Landings



Commercial landings through July 29, 2021

AP Fishery Performance Report

General Management Issues (All 3 Species)

- Concerns with the accuracy of MRIP data
 - One added an accurate count of all saltwater rec. anglers is needed to comply with MSA/better manage the fishery
 - Concerns with 2020 rec. estimates using imputation methods
- COVID-19: major impacts on commercial and recreational fishing effort in 2020, negative impacts on commercial markets and prices.
- One advisor: should be a common commercial minimum mesh size for summer flounder, scup, and black sea bass

AP Fishery Performance Report

Environmental Issues (All 3 Species)

- More sharks due to overabundance of menhaden, increased predation on bluefish and striped bass, potentially also impacting BSB and SF
 - Predator/prey dynamics are not properly factored into current catch estimate data
- Need to address chemicals in the water, such as surfactants, that may negatively impact fish populations

AP Fishery Performance Report

Email Comments (all 3 species)

- Need to research fertilizers and pesticides in the water and the negative impacts to fish
- Need to understand effects of windmills, their construction, and seismic blasting on fish
- Due to Covid-19, 2020 data should be eliminated from evaluation methods

AP Fishery Performance Report



Market and Economic Issues

- COVID-19 had major impacts on comm. and rec. fisheries
- Effort notably down in commercial fishery as low prices did not justify trip costs
- Restaurant closures had big impact on markets & prices
- Some vessels did not fish all year
- Some noted difficulty finding reliable crew labor

AP Fishery Performance Report



Market and Economic Issues

- Commercial size limits resulted in markets for smaller fish being lost to imports
 - Market would be better for smaller fish that fit on plates/are better for single servings
 - Request for lowering commercial minimum size below 14" to allow targeting smaller fish

AP Fishery Performance Report



Market and Economic Issues

- Mixed comments on recreational catch and effort in 2020:
 - Reduced participation in marinas – does not match with MRIP data that shows an increase in rec. catch
 - Charter industry in VA shut down for good part of season; does not believe that private boat effort was actually up as indicated by managers
 - Overall recreational effort for all species seemed to be up in 2020

AP Fishery Performance Report



Environmental and General Fishing Trends

- Summer flounder fishing “off” last year; many commercial and rec. fishermen not targeting or catching very few
- Showed up late in the season (August instead of April or May)
 - Due to sharks keeping fish offshore?

AP Fishery Performance Report



Management Issues

- Concerns with 2020 MRIP estimates using 2018-2019 data given differences in fisheries in these years
 - 2018-2019 “boom year”; 2020 “bust year”
- Question about whether regulatory discards are counted against catch limits despite being unavoidable for vessels
- Request for consideration of recreational total length limit with mandatory retention

AP Fishery Performance Report



Email Comments (Summer Flounder)

- Virtually no summer flounder rec. fishery inshore anymore (MA)
- Summer flounder comm. minimum size should be lowered to 13"
 - Turn discards into landings; discarded fish are not spawning
- Request for changes to small mesh exemption program (will cover later in presentation)

Summer Flounder—SSC Comments

- Level 1 Management Track Assessment requiring no prior external review before coming to the SSC. Single year of new data—i.e., no 2020 catch or federal surveys.
- Some of the fishery independent surveys were conducted in 2020. Most survey abundances were low, mean lengths and average weights at age declined, and age at maturity appears to be increasing. Only slight declines in estimates of F_{msy} and B_{msy} proxies. **The stock is not overfished and overfishing is not occurring.**
- Inclusion of revised MRIP estimates of recreational landings and discards in the previous assessment resulted in a major change in population scale but no change in status.
- One of the most stable assessments in the Mid-Atlantic.
- Near target fishing mortality rates in recent decades have allowed for a broad expansion of age classes of both males and females in the population. Increased proportions of males in the population reduces support for a previous hypothesis of differential natural mortality rates by sex.
- Monitoring commercial catches by port agents has declined. Such changes, if they continue, risk the loss of valuable information to improve our understanding of the underlying biology of Summer Flounder.

Summer Flounder—Terms of Reference

- Accepts the Maximum Fishing Mortality Threshold ($F_{35\%} = 0.422$) used in the assessment.
- Recommends the use of the most recent nine-year recruitment series for OFL projections rather than the entire 38-year time series.
- Continues to use the 60% OFL CV:
 - No major changes to the quality of the data and model that the SSC has previously determined to meet the criteria for a 60% CV;
 - A data rich assessment with many fishery-independent surveys incorporated and with relatively good precision of the fishery-dependent data;
 - Several different models and model configurations were considered and evaluated by SAW-66, most of which showed similar stock trends and stock status; and
 - No major persistent retrospective patterns were identified in the most recent model.

Summer Flounder—Sources of Uncertainty

- Changes in life history are apparent in the population; for example, declining growth rates and differences in sex-specific age structure.
- Uncertainty regarding recreational catch and discard estimates from MRIP, especially for 2020 where some data were imputed.
- Potential changes in productivity of the stock, which may affect estimates of Biological Reference Points. Changes in size-at-age, growth, and recruitment may be environmentally mediated, but mechanisms are unknown.
- Potential changes in availability of fish to some surveys and to the fishery as a result of changes in the distribution of the population.

Summer Flounder—Research Recommendations

- Understand the objectives and performance measures for the fishery from a socioeconomic perspective, to evaluate the balance of costs and benefits of ABC specifications.
- Evaluate the causes of decreased recruitment and changes in the recruit per spawner relationship in recent years;
- Evaluate causes and consequences of Summer Flounder declines in Chesapeake Bay
- Evaluate the effects of past and possible future changes to size regulations on retention and selectivity in stock assessments and projections;
- Further develop understanding of effects of ecosystem changes (e.g., temperature, trophic structure changes) on population dynamics; and
- The SSC is concerned over the reduction in port sampling which has the potential to exacerbate concerns about the dynamics of older fish.

Summer Flounder — Bottom Line

Species	Year	Overfishing Limit (OFL) (mt)	Acceptable Biological Catch (ABC) (mt)	Probability of Overfishing (P*)
Summer Flounder, varying	2022	16,458	15,403	0.452
	2023	15,759	14,639	0.447
Summer Flounder, constant harvest	2022	16,458	15,021	0.435
	2023	15,865	15,021	0.461

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2022-2023 SSC ABC Recommendations



- Provided annually varying and constant recs. (policy decision for Council and Board)
- Applied 60% OFL CV; sampled R from recent below-average time series; assumes catch = ABC in each year

	Varying				Constant			
	OFL (mt)	OFL (mil lb)	ABC (mt)	ABC (mil lb)	OFL (mt)	OFL (mil lb)	ABC (mt)	ABC (mil lb)
2022	16,458	36.28	15,403	33.96	16,458	36.28	15,021	33.12
2023	15,759	34.74	14,639	32.27	34.98	15,865	15,021	33.12

MC Recommendations

2022-2023 Sector-Specific Limits

- Commercial/recreational allocation amendment pending final action Dec. 2021
 - Would impact 2023 sector catch and landings limits if allocations were modified

Summer Flounder

Generic Specifications Flowchart

OFL
From stock assessment projections

ABC
SSC Recommendations



Landings portion of ABC
ABC projections from NEFSC

Discards portion of ABC
ABC projections from NEFSC

Comm. landings
60% of ABC landings portion (current FMP allocation)

Rec. landings
40% of ABC landings portion (current FMP allocation)

Projected comm. discards
% of total expected discards based on 3-year moving average by sector

Projected rec. discards
% of total expected discards based on 3-year moving average by sector

Commercial ACL
Commercial landings allocation plus proj. commercial discards

Recreational ACL
Recreational landings allocation plus proj. recreational discards

Commercial ACT
ACL minus deduction for management uncertainty

Recreational ACT
ACL minus deduction for management uncertainty

Commercial Quota
ACT minus commercial discards and any applicable overage deductions

State Quotas

Recreational Harvest Limit
ACT minus recreational discards and any applicable overage deductions

Deriving 2022-2023 ACLs (mil lb)

	Varying 2022	Varying 2023	Constant 2022-2023	Basis
ABC	33.96	32.27	33.12	SSC recs
ABC Landings	26.48	25.29	25.89	ABC projections (avg. approach includes averaged 2022-2023 expected landings)
ABC Discards	7.48	6.99	7.23	ABC projections (avg. approach includes averaged 2022-2023 expected disc.)
Comm. Discards	3.05	2.85	2.95	41% of ABC dead discards portion (2017-2019 average % dead discards by sector)
Rec. Discards	4.43	4.14	4.28	59% of ABC dead discards portion (2017-2019 average % dead discards by sector)
Comm ACL	18.94	18.02	18.48	60% of ABC landings portion (FMP allocation) + expected commercial dead discards
Rec ACL	15.02	14.25	14.64	40% of ABC landings portion (FMP allocation) + expected rec. dead discards

MC Recommendations

2022-2023 ACTs

- Monitoring Committee recommended **no deduction from the commercial or recreational ACL** to account for management uncertainty in 2022-2023
- Commercial landings well controlled; in-season closure authority; underages in 2019-2020
- Recreational performance more variable (on target in 2019, over in 2020)
 - Accountability measures triggered based on 3 year moving average of catch
 - Council and Board currently considering many changes to recreational management through Recreational Reform Initiative that could better address recreational management uncertainty

Current (2021) and MC Recommended 2022-2023 Catch and Landings Limits (mil lb)

	Current	Varying		Constant (MC preferred)
	2021	2022	2023	2022-2023
OFL	31.67	36.28	34.74	36.28 (2022) 34.98 (2023)
ABC	27.11	33.96	32.27	33.12
Commercial ACL = ACT	14.63	18.94	18.02	18.48
Recreational ACL = ACT	12.48	15.02	14.25	14.64
Commercial Quota	12.49	15.89	15.17	15.53
Recreational Harvest Limit	8.32	10.59	10.12	10.36

MC Recommendations: Mesh Size Regulations & Exemptions

- **MC recommends no changes in 2022 to:**
 - 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 mesh exemption programs (Small Mesh Exemption Program and flynet exemption)

MC Recommendations: Mesh Size Regulations & Exemptions

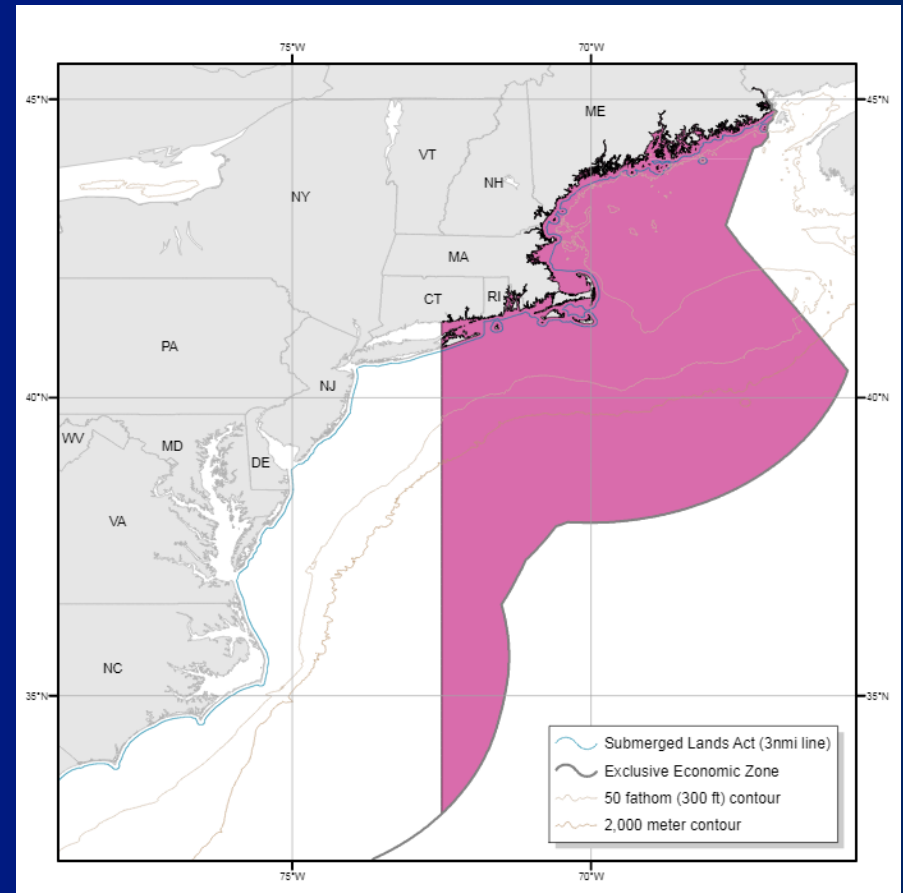
- MC has previously identified additional work & industry input needed to evaluate mesh regulations & exemptions for all 3 FMP species
 - Council/Board identified as lower priority given other actions
 - Unable to address this in 2021 due to other priorities
 - Staff recommend seeking contractor for additional policy analysis of SF/scup/BSB mesh regulations in 2022

MC Recommendations: 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
 - Past MC concern about retention of undersized fish with 6.0" square; recommendation to evaluate possible phase out of 6.0" square option

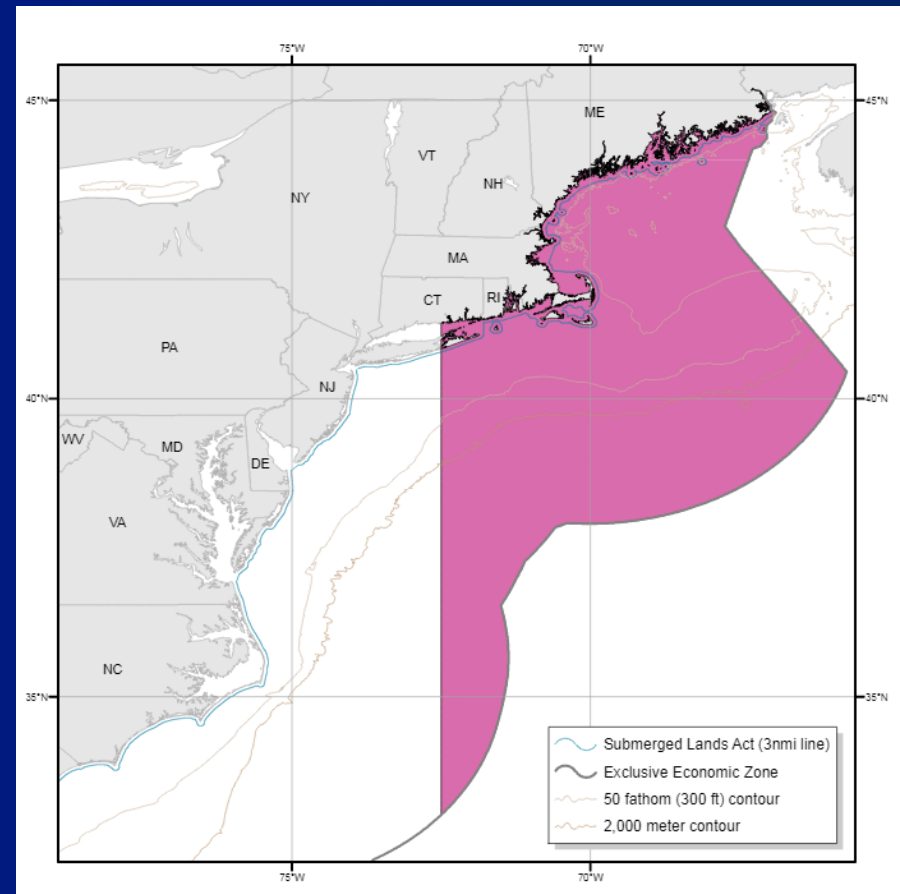
Small Mesh Exemption Program

- 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



Advisor Email Comment on Small Mesh Exemption

- Request to remove summer flounder small mesh exemption area line
 - Vessels should be allowed to possess up to 1,000 lb with small mesh regardless of fishing area
 - Directed trips over 1,000 lb should have 5" mesh requirement (vs. 5.5" diamond/6" square currently)



MC Recommendations: Small Mesh Exemption Program

- Support for further evaluation of this program and the line
 - Agreed with advisor reasoning that line was designated a long time ago and could use review
- Agreed with staff that request to remove line and change small mesh possession limit would potentially have major impacts; needs additional analysis
 - 1,000 lb incidental possession limit could also conflict with state regulations
- No changes in 2022; pursue further evaluation

MC Recommendations: Flynet Exemption

- 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 recent years

MC Recommendations: Flynet Exemption

- 2020 public comment: flynet exemption is being used outside NC with “high rise” nets on multispecies trips
 - Requested change in definition to include 4-seam nets in addition to 2-seam nets
- MC previously discussed that very few SNE/Mid-Atlantic fishermen in offshore trawl fishery use 2 seam nets
 - Possible compliance/enforcement issue if vessels using exemption are not meeting regulatory definition

MC Recommendations: Flynet Exemption

- No changes for 2022
- Input from gear experts, industry, and enforcement needed on this issue
 - Better understand use and configuration of flynet and high-rise nets as related to this exemption

July 29 Advisory Panel Comments

Constant vs Varying ABC approach

- 4 supported varied, one AP member added concerned that the MC would make recommendations based on market stability
- One supported constant approach, stability would be beneficial for the price since the market is fragile/recovering from COVID impacts

July 29 Advisory Panel Comments

- Concern over the 31% RHL overage, though skeptical of the 2020 MRIP estimates. MC identifies areas of management uncertainty in the recreational sector but then does not apply a buffer to the rec ACL.
- Impacts of overages on SSB over time
- Fewer summer flounder over the past three years/fishing has been slow this year
- Commercial measures: one advisor recommended keeping a 5 and a half inch minimum mesh size and agreed with revisiting the exemption line and added that he did not think anyone uses a 2 seam flynet
- One advisor recommended a 5 inch mesh and 11 or 12 inch min size

Council and Board Decision Points

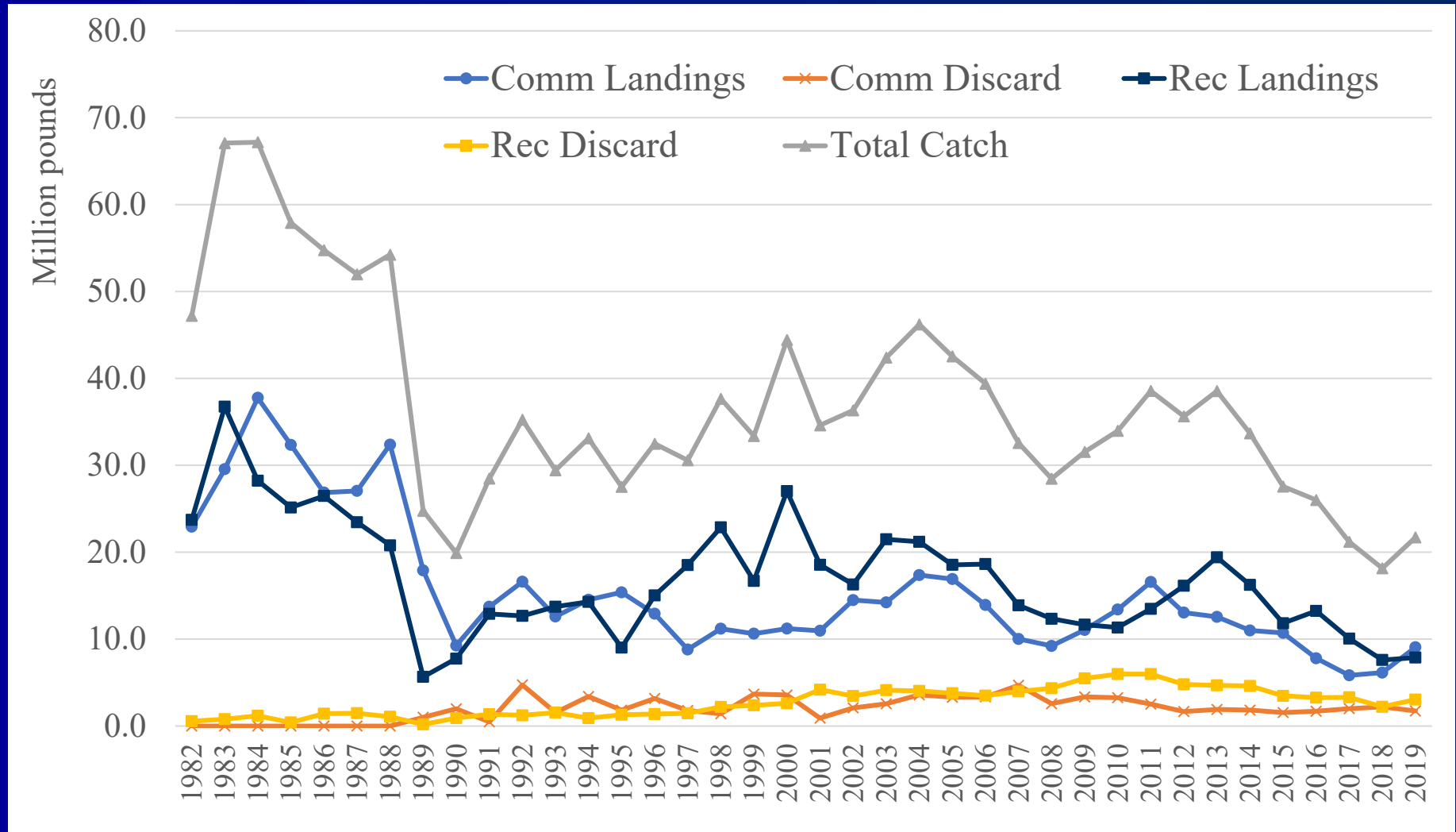
- Adopt 2022-2023 ACLs, ACTs, commercial quotas, and RHLs
 - Under ABC constant or varying approach
- Review commercial measures and adopt changes if warranted
 - Commercial minimum fish size
 - Minimum mesh size and exemptions
 - Seasonal possession limits triggering minimum mesh requirement

Current (2021) and MC Recommended 2022-2023 Catch and Landings Limits (mil lb)

	Current	Varying		Constant (MC preferred)
	2021	2022	2023	2022-2023
OFL	31.67	36.28	34.74	36.28 (2022) 34.98 (2023)
ABC	27.11	33.96	32.27	33.12
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Commercial Quota	12.49	15.89	15.17	15.53
Recreational Harvest Limit	8.32	10.59	10.12	10.36

BACKUP SLIDES

Fishery Catch 1982-2019



Commercial Allocation Revisions Effective Jan. 1, 2021

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
49 Total	100	11,530,000	100	100

Summer Flounder

2022-2023 MC Rec. Measures
Constant Approach

OFL = 36.28/34.98 m lb
From stock assessment projections

ABC = 33.12 m lb
SSC Recommendation for constant approach

ATLANTIC
UNCIL

Landings portion = 25.89 m lb
NEFSC ABC projections

Discards portion = 7.23 m lb
NEFSC ABC projections

Commercial landings = 15.53 m lb
60% of ABC landings portion (FMP)

Recreational landings = 10.36 m lb
40% of ABC landings portion (FMP)

Projected commercial discards = 2.95 m lb
41% of ABC discards portion, based on 2017-2019 average % of total discards by sector

Projected recreational discards = 4.28 m lb
59% of ABC discards portion, based on 2017-2019 average % of total discards by sector

Commercial ACL = 18.48 m lb
Commercial landings allocation plus proj. commercial discards

Recreational ACL = 14.64 m lb
Recreational landings allocation plus proj. recreational discards

Commercial ACT = 18.48 m lb
Staff rec, Set equal to ACL; no deduction for management uncertainty

Recreational ACT = 14.64 m lb
Staff rec, Set equal to ACL; no deduction for management uncertainty

Commercial Quota = 15.53 m lb
ACT minus commercial discards (before overage deductions)

State Quotas

Recreational Harvest Limit = 10.36 m lb
ACT minus recreational discards

Comm. Discard Projection Performance

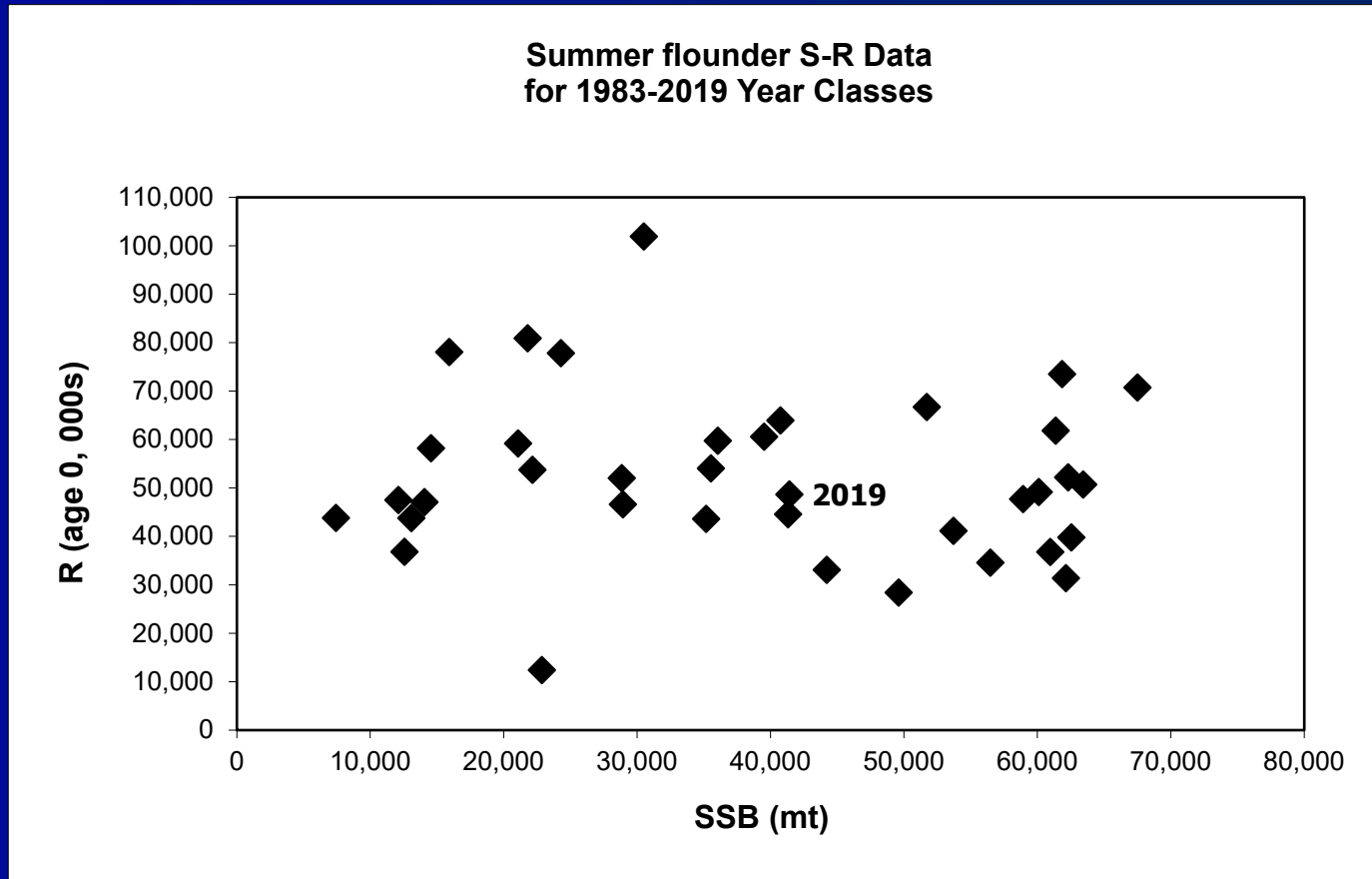
	Projected comm. Discard (mil lb)	NEFSC Comm. Discard Estimates (mil lb)	% difference
2014	2.03	1.83	-10%
2015	2.27	1.55	-32%
2016	1.31	1.70	+30%
2017	0.92	2.00	+117%
2018	1.07	2.20	+105%
2019	2.00	1.73	-13%

Rec. discard projection performance

	Projected rec. Discard (mil lb)	NEFSC rec. discard Estimates – OLD MRIP through 2018 (mil lb)	% difference
2014	1.84	2.05	12%
2015	2.06	1.24	-40%
2016	1.41	1.48	5%
2017	0.95	0.94	-1%
2018	1.11	--	--
2019	3.82	3.04	-20%

MC Recommendations: Small Mesh Exemption Program

- Some past concerns about increasing percent of SMEP trips landings more than 200 lb of summer flounder but discarding more than 10% of catch
 - Thought to be related to quota constraints
 - Available Nov 2019-Mar 2020 data shows decrease



Stock-recruitment (SSB-R) scatter plot for the summer flounder 1983-2019 year classes. The largest recruitment (R) point is for the 1983 year class (R = 102 million, SSB = 30,495 mt). The lowest recruitment point is for the 1988 year class (R = 12 million, SSB = 22,859 mt). The 2018 year class is at R = 61 million, SSB = 39,516 mt; the 2019 year class is at R = 48 million, SSB = 41,403 mt.