



Golden Tilefish



Council Meeting
Multi-year Specifications -
Framework Meeting #2

August 11, 2021

Multi-year Specifications Framework

- 2021 Council Proposed Actions and Deliverables
 - Initiate golden tilefish multi-year specifications framework (E.O. 13921 recommendation)
- Framework - two process related issues and Specifications for 2022-2024
- Framework Meeting 1 – April 7, 2021
 - Selected preferred process related alternatives
- Framework Meeting 2 – August 11, 2021

Today's Objectives

- Framework meeting 2
 - Review range of alternatives
- Finalize selecting specifications alternatives (catch and landings limits)
- Adopt Framework

Issues and Alternatives

- 1) Multi-Year Specifications
 - Golden tilefish management specifications set for up to 3 years
 - Modify process to simply change the number of years (time period) for which those measures could be set so they match Northeast Regional Coordinating Council stock assessment schedule

Issues and Alternatives

■ 1) Multi-Year Specifications

- Alternative 1 (5.1.1): No Action/*Status Quo*
- **Alternative 2 - Preferred (5.1.2):**
Specifications to be set for maximum number of years needed to be consistent with the Northeast Regional Coordinating Council approved stock assessment schedule

Issues and Alternatives

- 1) Multi-Year Specifications
 - None of the multi-year specification alternatives are expected to impact the prosecution of the golden tilefish fishery, including landings levels, distribution of fishing effort, or fishing methods and practices

Issues and Alternatives

■ 1) Multi-Year Specifications

Alternatives	Biological	Physical Habitat	Protected Resources	Human Communities
Alternative 1 (Non-Preferred: No Action/Status Quo)	0	0	0	0
Alternative 2 (Preferred: Specifications to be set for maximum number of years needed to be consistent with the Northeast Regional Coordinating Council (NRCC)-approved stock assessment schedule)	0	0	0	0; some administrative efficiencies would result.

❖ Advisory Panel input

Issues and Alternatives

- 2) Fishing Year Timing
 - Fishing year is November 1 – October 31
 - Modify process to simply change how the fishing year timing is set

Issues and Alternatives

- 2) Fishing Year Timing
 - Alternative 1 (5.2.1): No Action/*Status Quo*
 - **Alternative 2 – Preferred (5.2.2):** Golden tilefish fishing year is the 12-month period beginning with January 1, annually
 - Therefore, the fishing year is January 1 – December 31

Issues and Alternatives

■ 2) Fishing Year Timing

□ Under Alternative 2

- Fishing year = calendar year
- Matches fishing year with cost recovery calculations
- Matches stock assessment results/projections which are based on calendar year

Issues and Alternatives

- 2) Fishing Year Timing
 - None of the fishing year timing alternatives are expected to impact the prosecution of the golden tilefish fishery, including landings levels, distribution of fishing effort, or fishing methods and practices

Issues and Alternatives

■ 2) Fishing Year Timing

Alternatives	Biological	Physical Habitat	Protected Resources	Human Communities
Alternative 1 (Non-Preferred: No Action/Status Quo)	0	0	0	0
Alternative 2 (Preferred: The golden tilefish fishing year is the 12-month period beginning with January 1, annually)	0 to sl ⁺ (target); 0 (non-target)	0	0	0 to sl ⁺

❖ Advisory Panel input

Issues and Alternatives

- 3) 2022 – 2024 Specifications
 - Regulatory Review
 - Stock Status (2021 MTA)
 - Recent Fishery Performance
 - 2021 Fishery Information Document
 - 2021 Fishery Performance Report
 - SSC, MC, Staff recommendations

Regulatory Review

- In 2020 catch and landings limits we set for 2021 and 2022 (interim)
- 1st year of a 2-year specifications cycle
- Interim specifications were set:
 - Potential timing constraints with the 2021 MTA
 - Administrative efficiency
- 2021 MTA will be used to review 2022 interim value and set values for 2023-2024

Current Specifications

	2021 (initial values)*	2021 IFQ TAL w/ Max Carryover**	2022 (interim)	Basis
ABC	1.636 m lb (742 mt)	-	1.636 m lb (742 mt)	SSC recommendation, based on data update, recent fishing trends, and scheduled 2021 management track assessment update that will be used to revise 2022 interim specifications
ACL	1.636 m lb (742 mt)	-	1.636 m lb (742 mt)	ABC = ACL
Management Uncertainty	0	-	0	Derived by Monitoring Committee (MC)
IFQ ACT	1.554 m lb (705 mt)	-	1.554 m lb (705 mt)	95% ACL
Incidental ACT	0.082 m lb (37 mt)	-	0.082 m lb (37 mt)	5% ACL
IFQ Discards	0	-	0	Discards in the IFQ fishery are prohibited
Incidental Discards	0.011 m lb (5 mt)	-	0.011 m lb (5 mt)	Avg. discard (2015-2019) mostly sm/lg mesh OT and Gillnet gear. NEFSC
IFQ TAL	1.554 m lb (705 mt)	1.601 m lb (726 mt)	1.554 m lb (705 mt)	IFQ ACT - IFQ Discards
Incidental TAL	0.070 m lb (32 mt)	-	0.070 m lb (32 mt)	Incidental ACT - Incidental Discards

Stock Status; 2021 MTA

- Golden tilefish management track assessment (Nitschke 2021)
- Stock not overfish and overfishing was not occurring in 2020 relative to newly develop BRPs

Stock Status; 2021 MTA

- Fishing mortality in 2020 was estimated at $F=0.160$; 39% below the fishing mortality threshold of $F=0.261$ (F_{MSY} proxy = $F_{40\%}$)
- SSB in 2020 was estimated at 23.28 million pounds (10,562 mt), and was at 96% of the biomass target (SSB_{MSY} proxy = $SSB_{40\%}$)

2021 MTA

- CPUE continues to increase
- Broad distribution of fish landed
- Above average year class for 2017 (2.1 million fish)

2021 MTA

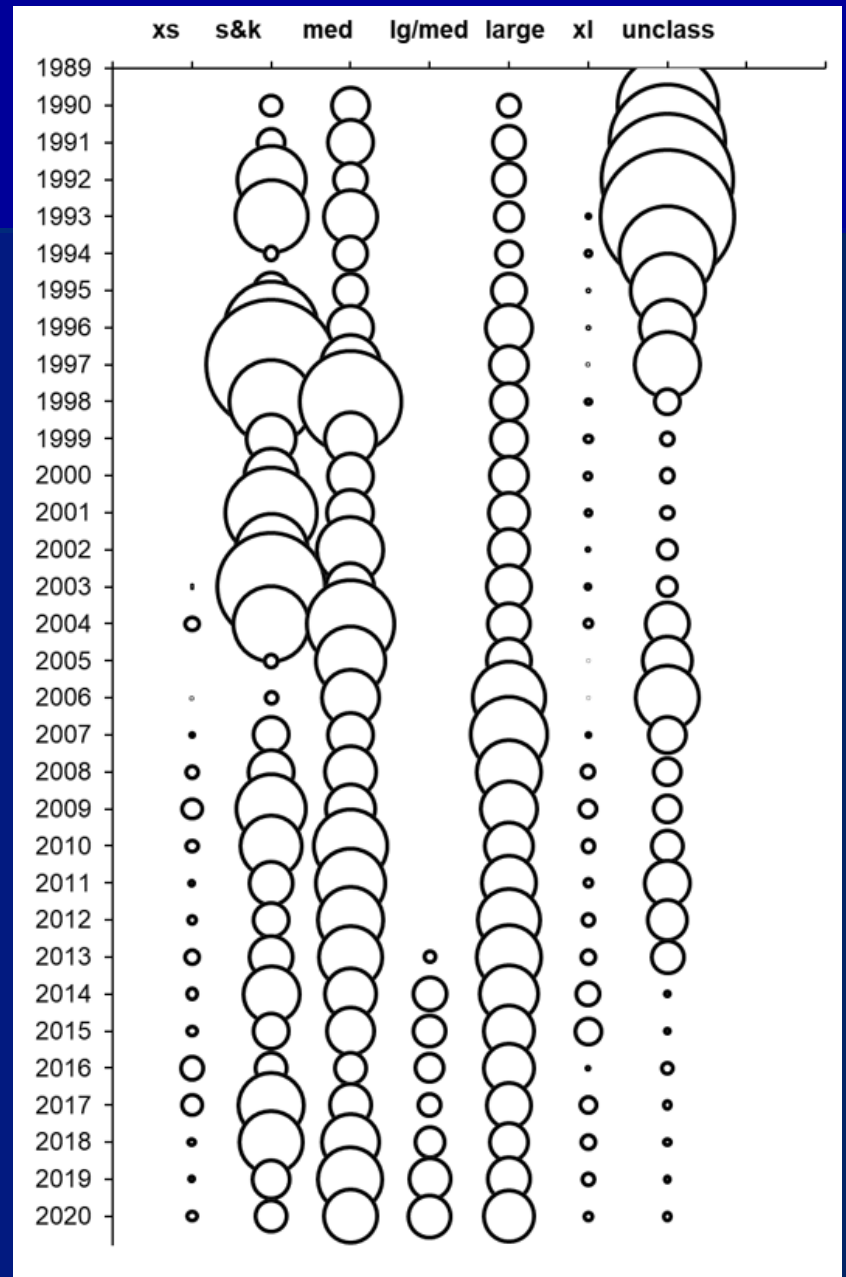
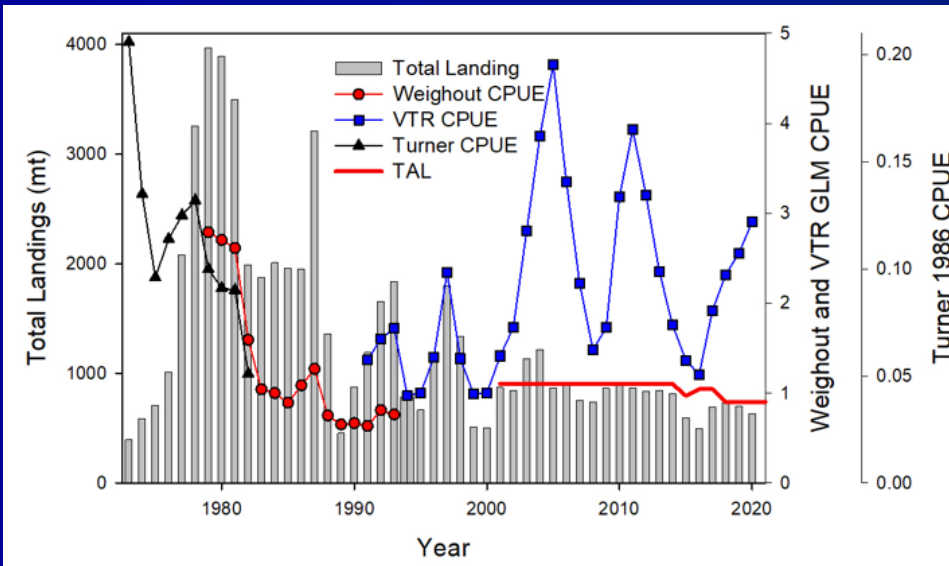


Table 1 (Abbreviated). Summary of management measures and landings for FY 2010 through 2020.

Management Measures	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
ABC (m lb)	-	-	-	-	2.013	2.013	1.766	1.898	1.898	1.636	1.636	1.636	1.636	1.636
TAL (m lb)	1.995	1.995	1.995	1.995	1.995	1.995	1.755	1.887	1.887	1.626	1.626	1.626	1.625	1.625
Com. quota- (m lb)	1.995	1.995	1.995	1.995	1.995	1.995	1.755	1.887	1.887	1.626	1.626	1.626	1.625/ 1.701*	1.625
Com. landings (m lb)	1.887	1.997	1.946	1.856	1.839	1.830	1.354	1.060	1.487	1.626	1.563	1.403	-	-
Com. Overage / underage (m lb)	-0.108	+0.002	-0.049	-0.139	-0.156	-0.165	-0.401	-0.827	-0.401	<-0.001	-0.064	-0.223	-	-
Incidental trip limit (lb)	300	300	300	500	500	500	500	500	500	500	500	500	500	500
Rec. possession limit	-	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b

Table 1 (Abbreviated). Summary of management measures and landings for FY 2010 through 2020.

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ABC (m lb)	-	-	-	-	2.013	2.013	1.766	1.898	1.898	1.636	1.636	1.636	1.636	1.636
TAL (m lb)	1.995	1.995	1.995	1.995	1.995	1.995	1.755	1.887	1.887	1.626	1.626	1.626	1.625	1.625
Com. quota- (m lb)	1.995	1.995	1.995	1.995	1.995	1.995	1.755	1.887	1.887	1.626	1.626	1.626	1.625/ 1.701*	1.625
Com. landings (m lb)	1.887	1.997	1.946	1.856	1.839	1.830	1.354	1.060	1.487	1.626	1.563	1.403	-	-
Com. Overage / underage (m lb)	-0.108	+0.002	-0.049	-0.139	-0.156	-0.165	-0.401	-0.827	-0.401	<-0.001	-0.064	-0.223	-	-
Incidental trip limit (lb)	300	300	300	500	500	500	500	500	500	500	500	500	500	500
Rec. possession limit	-	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b	8 ^b

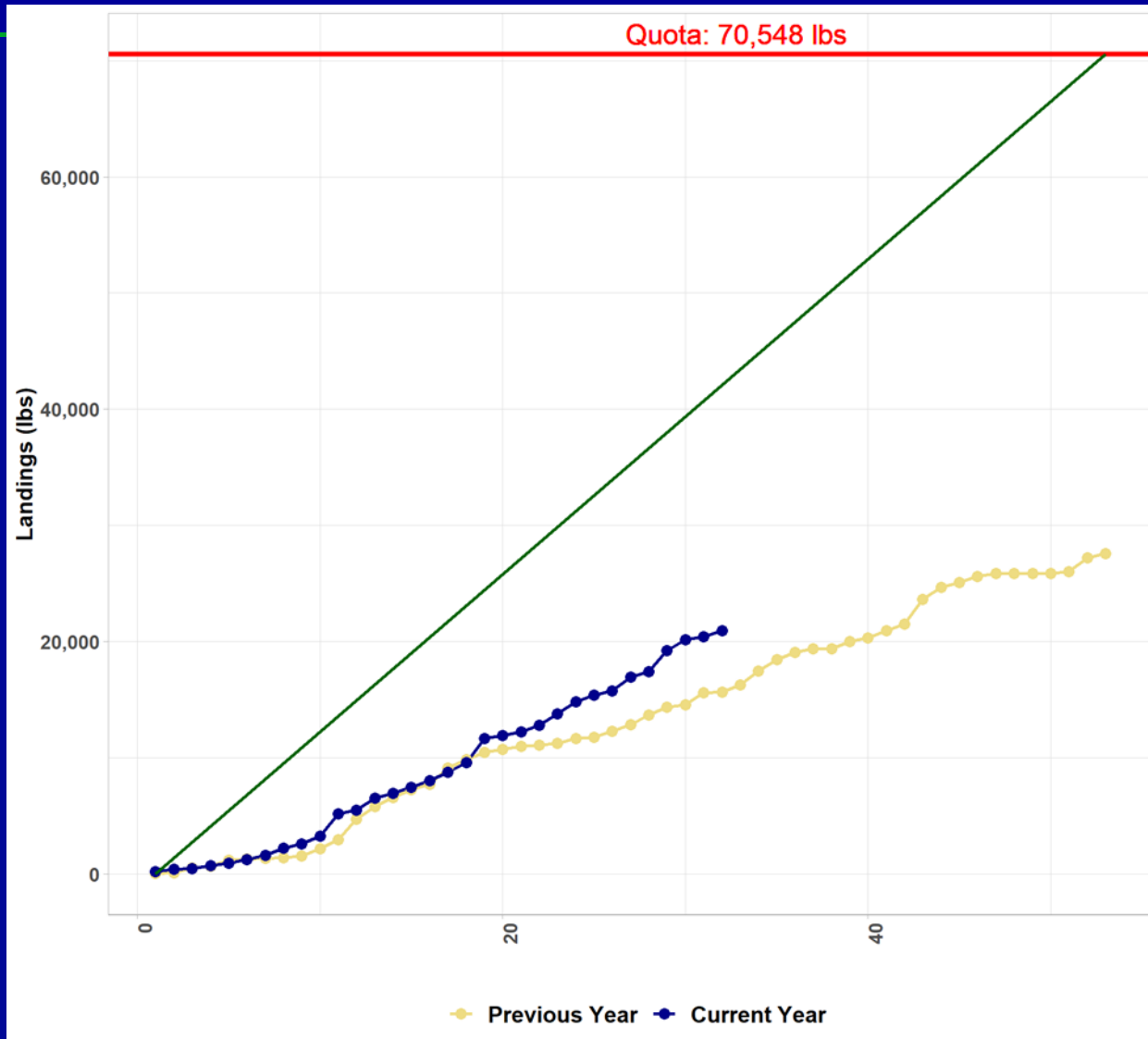
Commercial Landings

- Tilefish are primarily caught by longline (97%) and bottom otter trawl (2%) for the 2016-2020 period (Table 2)

Landings, ex-vessel value, and price/lb

- 2020 landings – 1.28 million pounds (9% decrease from 2019)
 - 1.41 million pounds in 2019
- 2020 ex-vessel revenue – \$4.81 million (11% decrease from 2019)
 - \$5.37 million in 2019
- 2020 mean price per pound – \$3.75 (2% decrease from 2019)
 - \$3.81/lb in 2019

Incidental Landings



Discard Trends

- According to the “Discard Estimation, Precision, and Sample Size Analysis” conducted by the NEFSC, discard estimations for commercial fisheries are low (mostly large/small mesh trawls and gillnets)
 - 2016-2020 – avg. 17,405 pounds (~8 mt)

Dealers

- In 2020 - 50 dealers - \$4.81 million – 105 vessels
- In 2019 - 54 dealers - \$5.37 million – 106 vessels
- Dealers are mostly located in NY, RI, NJ, MA, and CT (Table 9)

Year	Party/Charter		Private ^a	
	Number of golden tilefish kept	Mean effort	Number of golden tilefish kept	Mean effort
1996	81	1.4	---	---
1997	400	7.5	---	---
1998	243	8.1	---	---
1999	91	0.4	---	---
2000	147	0.5	---	---
2001	172	0.7	---	---
2002	774	0.9	---	---
2003	991	1.6	---	---
2004	737	1.2	---	---
2005	498	0.9	---	---
2006	477	1.2	---	---
2007	1,077	1.2	---	---
2008	1,100	1.3	---	---
2009	1,451	1.3	---	---
2010	1,866	2.0	---	---
2011	2,938	3.4	---	---
2012	6,424	2.8	---	---
2013	6,560	3.2	---	---
2014	6,958	3.1	---	---
2015	8,297	4.2	---	---
2016	5,919	4.1	---	---
2017	7,014	4.6	---	---
2018	7,110	3.9	---	---
2019	5,424	3.1	---	---
2020	3,466	3.2	50	5.0
All	70,215*	2.8	50	5.0

Table 14.
Number of
tilefish kept
by rec.
anglers and
mean effort
from Maine
through
Virginia, 1996
through 2020,
VTR data.

Recreational Fishery

- Private Recreational Angler Permitting and Reporting
 - Mandatory - August 17, 2020
 - Permit allows rec anglers to land GTF & BLT

- In 2020 (Aug to Dec)
 - 50 fish were landed
 - 5 fish were discarded

Fishery Performance Report

- Advisors met February 17, 2021
- Asked series of trigger questions
- AP identified several “Critical Issues”
- Also note, advisors have consistently indicated like to see status quo quotas from year-to-year
 - quota stability = fishery/market stability

Fishery Performance Report

■ COVID-19

- Reduction in demand/restaurant closures
- Spreading landings to avoid market gluts
- Large price reduction beginning on pandemic
- Prices are now relatively stable
- For-hire effort was reduced in 2020, experiencing the same in 2021

Fishery Performance Report

■ CPUE

- Increasing CPUE, more fish caught w/ same trip effort compared to 2019
- Larger amount/proportion of small & kittens (2-3.5 lb) in 2020 compared to previous years
- s&k trend continued to increase in 2021

■ Recreational

- 2020 tuna season was good = less boats targeting tilefish

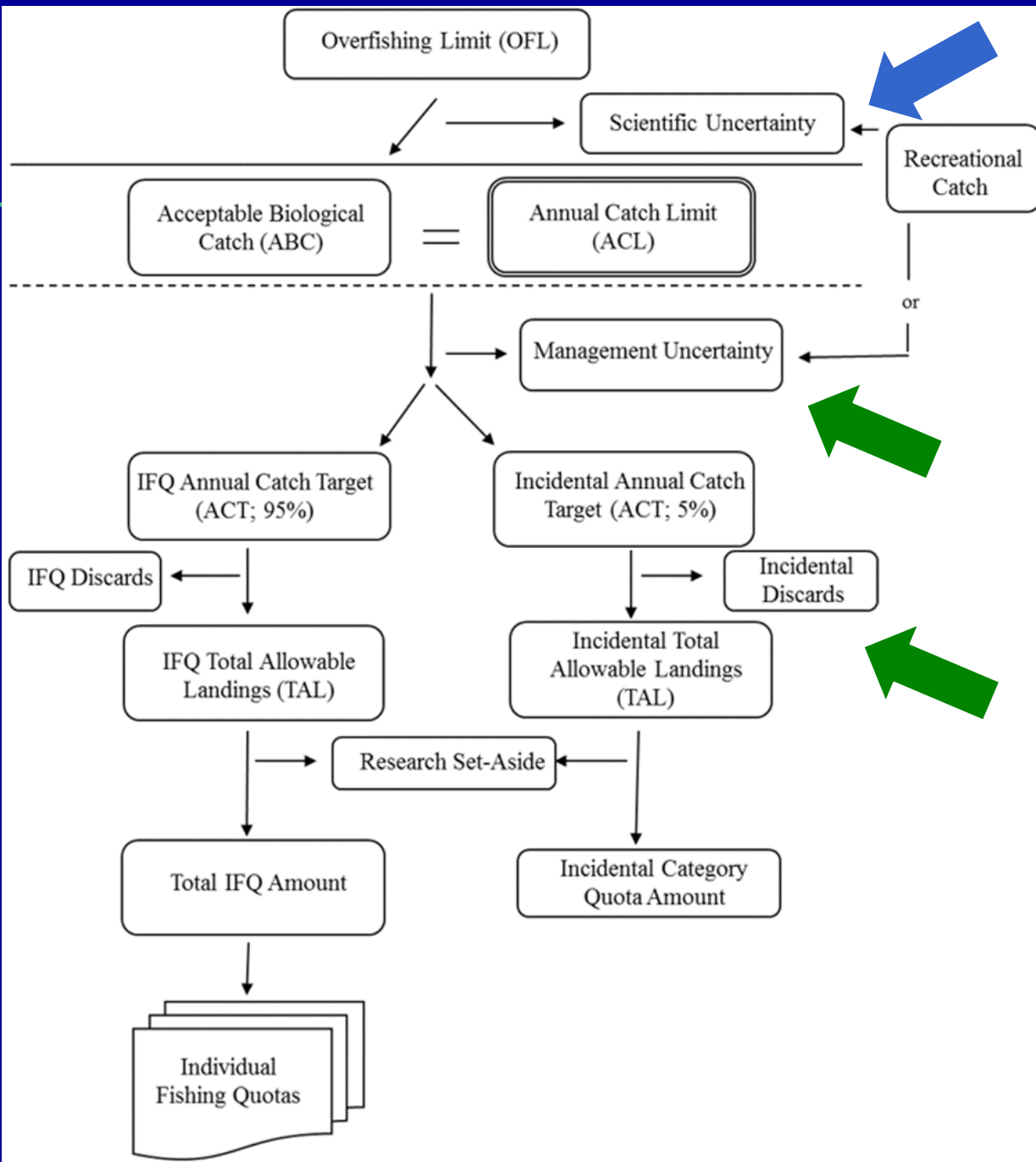
Fishery Performance Report

- Support development of the multi-year specifications framework
 - Timing of the fishing year
 - January 1 to December 31
 - Duration for setting multi-year specifications
 - Coincide with Northeast Regional Coordinating Council assessment schedule

Fishery Performance Report

■ Other issues

- Concern about lack of biological sampling of landings on the dock
- Would like to have more input when future longline surveys are designed
 - Captains input regarding where to fish/sample



Tilefish Flow Chart for Catch and Landings Limits

Golden Tilefish—SSC Comments

- Assessment included data through 2020. Relied exclusively on fishery dependent data. Retrospective patterns insignificant.
- CPUE has oscillated over this period as new recruits enter the fishery. Current increases in catches and abundance appear to be driven by the 2013-2014 year classes. CPUE is expected to decline in coming years. The model estimates a dome-shaped selectivity pattern.
- Industry reported large proportions of 2 - 3.5 lb fish in current landings, suggesting an incoming year class.
- Two recent longline surveys may prove useful. Will be evaluated at 2024 Research Track Assessment.
- A major change was inclusion of more year-specific age-length keys.

Golden Tilefish—SSC Comments

- Concern—recent declines in numbers of biological samples taken by port agents.
- Sensitivity analyses indicated that a small sample of 16 unclassified fish had a major impact on abundance estimate for the 2017 cohort. This was raised as a source of concern regarding potential undue optimism over projected stock sizes.
- Golden Tilefish rare in MRIP angler intercepts. Results of mandatory reporting (late 2020) not yet interpretable.
- A member of industry expressed the desire for stable harvest levels, even at slightly lower levels--ensure proper development of markets and avoid oscillations between years that cause price changes.

Golden Tilefish—Terms of Reference

- Recommends OFL CV=100%. Why?
 - Consistency between input data and model dynamics, good model diagnostics, and the lack of a pathological retrospective pattern.
 - Projections are sensitive to inclusion of the unclassified market category (small sample of small fish) from recent years, as this is the only indication of potential recruitment.
 - Improved age data and good agreement between assessments.
- See bottom line slide of OFLs & ABCs for Pstar and 3 yr average ABC

Golden Tilefish—Sources of Uncertainty

- Reliance on fishery-dependent data in the assessment.
- Reliability of the F_{msy} proxy.
- Dome-shape selectivity curve lacks strong empirical evidence.
- Spatial Concerns
 - Extent of site fidelity of individuals,
 - Uncertainty in the stock range and distribution,
 - Consequences of the newly closed areas
- Lack of reliable recreational catch information.
- Use of a pooled age-length key for early years of model
- Lack of a recruitment index is problematic.

Golden Tilefish—Research Recommendations

- Improve data collection
 - Fishery-independent survey.
 - Observer coverage to improve fishery-dependent data.
 - Assess the accuracy and reliability of aging techniques
 - Continuation of adequate age sampling is critical
 - Leverage existing fishing activity to provide biological samples
 - Evaluate the role of sanctuaries on the Golden Tilefish stock and its fisheries.
- Modeling Improvements
 - Continue analyses of the dome-shaped selectivity
 - Reconsider overfishing definition of $F_{40\%}$.
 - Improve projection methodology
- Conservative approach to changes in the TAL over time appear to have resulted in overall benefits for both the Golden Tilefish stock and for the fishery.
- Significant concern with reductions in the biological port sampling

Golden Tilefish—Bottom Line

Species	Year	Overfishing Limit (OFL) (mt)	Acceptable Biological Catch (ABC) (mt)	Probability of Overfishing (P*)
Golden Tilefish (Scenario 1)	2022	1,011	867	0.43
	2023	1,013	917	0.45
	2024	975	890	0.46
Golden Tilefish (Scenario 2)	2022	1,011	891	0.44
	2023	1,010	891	0.44
	2024	976	891	0.46

SSC

- SSC provided ABCs under two scenarios
- Scenario 1 (traditional 100% CV)
 - 2022: 1,911,408 pounds mt (867 mt)
 - 2023: 2,021,639 pounds mt (917 mt)
 - 2024: 1,962,114 pounds mt (890 mt)
- Scenario 2 (constant avg 100% CV)
 - 2022: 1,964,319 pounds (891 mt)
 - 2023: 1,964,319 pounds (891 mt)
 - 2024: 1,964,319 pounds (891 mt)

SSC

- SSC noted the benefits/goal/prior practice of constant ABC
- Noted uncertainties/discussion:
 - Fishery-dependent data; dome-shape selectivity curve; stock range and distribution; lack of reliable recreational catch information; pooled age-length key
 - 2017-year class is highly uncertain
 - 2 unclassified samples = 16 fish sampled
- Industry representative noted:
 - Concerns about high ABCs = high TALs. Fishery may not be able to sustain those values

Staff Recommendations

- Memo to Chris Moore
- Set constant catch and landings limits for 2022, 2023, 2024

Staff Recommendations

- Average ABC of 1,964,319 pounds or 891 mt (scenario 2)
 - Council risk policy, and a constant average ABC
 - Current stock status
 - Average projected $SSB/SSB_{MSY}=102\%$ for 2022-2024
 - Constant year-to-year quota = stability in the fishery/markets
- No adjustment for management uncertainty
- Slight adjustment to incidental discards
- No changes to the bag limit or incidental tip limit

Staff Recommendations

	2022 (revised)	2023	2024	Basis
OFL	2,228,873 (1,011 mt)	2,226,669 (1,010 mt)	2,151,712 (976 mt)	Projections
ABC	1,964,319 (891 mt)	1,964,319 (891 mt)	1,964,319 (891 mt)	Staff recommendation based on overfishing probability averaging
ACL	1,964,319 (891 mt)	1,964,319 (891 mt)	1,964,319 (891 mt)	ABC = ACL
IFQ fishery ACT	1,866,103 (846 mt)	1,866,103 (846 mt)	1,866,103 (846 mt)	Deduction from management uncertainty = 0. ACT = 95% of the ACL
Incidental fishery ACT	98,216 (45 mt)	98,216 (45 mt)	98,216 (45 mt)	Deduction from management uncertainty = 0. ACT = 5% of the ACL
Projected IFQ fishery discards	0	0	0	Data indicates no discards in the IFQ fishery (directed fishery). IFQ fishery discards are prohibited in the FMP
Projected incidental fishery discards	17,405 (8 mt)	17,405 (8 mt)	17,405 (8 mt)	Average discards (2016-2020) mostly sm/lg mesh OT and Gillnet gear
IFQ fishery TAL = IFQ fishery quota	1,866,103 (846.450 mt)	1,866,103 (846.450 mt)	1,866,103 (846.450 mt)	IFQ fishery TAL = IFQ fishery ACT – IFQ fishery discards. No additional reductions applied between IFQ TAL amounts and final IFQ fishery quota amounts.
Incidental fishery TAL = incidental fishery quota	80,811 (36.665 mt)	80,811 (36.655 mt)	80,811 (36.655 mt)	Incidental fishery TAL = incidental fishery ACT – incidental fishery discards. No additional reductions applied between incidental TAL amounts and final incidental fishery quota amounts.

MC Recommendations

- Overall, near identical to staff
- However, ACT slightly lower than the ABC/ACL (~108,000 pounds lower)
- Resulting TAL

	Staff recommended overall TAL (pounds)	MC recommended overall TAL (pounds)	Percent difference of MC recommended TAL from staff recommended TAL	Percent difference of MC recommended TAL from 2021 overall TAL (1.625 million lb)
2022	1,946,914	1,838,888	-5.5%	+13.2%
2023	1,946,914	1,838,888	-5.5%	+13.2%
2024	1,946,914	1,838,888	-5.5%	+13.2%

MC Recommendations

- Fishery performance: 1.995 m lbs vs 1.665 m lbs TALs
- Stable long-term productivity
- Large increases in the TAL = targeting of the smaller fish (smalls and kittens) = higher risk to the stock
- Shares SSC concern about reduction in port biological sampling
 - Recommends Council writes a letter to the port sampling program regarding need to maintain/increase port sampling

Summary of recommended catch and landings limits (in pounds unless otherwise noted) for 2022 (revised), 2023, and 2024.

	2022 (revised)	2023	2024	Basis
OFL	2,228,873 (1,011 mt)	2,226,669 (1,010 mt)	2,151,712 (976 mt)	Projections
ABC	1,964,319 (891 mt)	1,964,319 (891 mt)	1,964,319 (891 mt)	Staff recommendation based on overfishing probability averaging
ACL	1,964,319 (891 mt)	1,964,319 (891 mt)	1,964,319 (891 mt)	ABC = ACL
IFQ fishery ACT	1,763,478 (800 mt)	1,763,478 (800 mt)	1,763,478 (800 mt)	Deduction from management uncertainty = 0. IFQ ACT = 95% of the ACL and incidental ACT = 5% of the ACL. However, the MC is recommending an ACT that is below the ABC/ACL derived from the SSC recommendation and it is based on the more stable long-term productivity of the stock to acknowledge the positive development in the stock status but also to mitigate the potential risk to the stability and success in managing this relative data poor fishery
Incidental fishery ACT	92,815 (42 mt)	92,815 (42 mt)	92,216 (45 mt)	
Projected IFQ fishery discards	0	0	0	Data indicates no discards in the IFQ fishery (directed fishery). IFQ fishery discards are prohibited in the FMP
Projected incidental fishery discards	17,405 (8 mt)	17,405 (8 mt)	17,405 (8 mt)	Average discards (2016-2020) mostly 3mm/lg mesh OT and Gillnet gear
IFQ fishery TAL = IFQ fishery quota	1,763,478 (799,900 mt)	1,763,478 (799,900 mt)	1,763,478 (799,900 mt)	IFQ fishery TAL = IFQ fishery ACT – IFQ fishery discards. No additional reductions applied between IFQ TAL amounts and final IFQ fishery quota amounts
Incidental fishery TAL = incidental fishery quota	75,410 (34.205 mt)	75,410 (34.205 mt)	75,410 (34.205 mt)	IFQ fishery TAL = IFQ fishery ACT – IFQ fishery discards. No additional reductions applied between IFQ TAL amounts and final IFQ fishery quota amounts

MC Recommendation

Multi-Year Specifications Framework

- Timing of the fishing year
- Council selected preferred alternative
 - January 1 to December 31
- Onetime adjustment only – gap fishing year
- 2022 FY will extend from November 1, 2021 to December 31, 2022
- 2023/2024 FYs = January 1 to December 31

Multi-Year Specifications Framework

- Resulting overall recommended MC TAL for FY 2022 is 13% higher compared to FY 2021
- However, on a common monthly denominator basis, it is 3% lower (due to gap year effect)
- 2021, 135,359 lb (1,624,305 lb/12 months)
- 2022, 131,349 lb (1,838,888 lb/14 months)

Framework Activity

Apr
2021

- First Framework meeting, reviewed range of alternatives. Selected preferred process related alternatives

May-
Jul
2021

- Completed draft EA

Aug
2021

- Second Framework meeting
- Select specifications for 2022-2024
- Approve Document for submission

Aug-
Oct
2021

- August/September – Finalize document
- September/October - Submit document to the Service

Discussion, Questions?

