



Mid-Atlantic Fishery Management Council

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MEMORANDUM

Date: July 7, 2021
To: Chris Moore, Executive Director
From: José Montañez, Staff
Subject: Golden Tilefish 2022 (interim) Specifications Review/Revise and 2023-2024 Specifications Setting

Summary

In 2020, the Council set specifications for 2021 and interim specifications for 2022. The 2022 interim specifications were set because of potential timing constraints associated with the 2021 management track assessment and administrative efficiencies. The Council anticipated the use of the 2021 golden tilefish management track assessment to review and possibly revise the interim 2022 specifications and set specifications for the 2023 and 2024 fishing seasons.

Based on the results of the management track assessment received in June 2021, the tilefish resource is not overfished and overfishing is not occurring in assessment terminal year (2020; Nitschke 2021a). The 2020 stock (23.28 million pounds or 10,562 mt) is at 96% of the updated biomass target reference point (SSB_{MSY} proxy = $SSB_{40\%}$ = 24.23 million pounds or 10,995 mt). The fishing mortality rate (F) in 2020 was 0.160, 39% below the fishing mortality updated threshold reference point F_{MSY} proxy = $F_{40\%}$ = 0.261.

Staff recommend 2022 interim specifications be revised and set additional specifications for years 2023 and 2024.¹ Staff recommend the accepted biological catch (ABC) for each year 2022, 2023, and 2024 be set at 1,964,319 pounds (891 mt).² This is based on an SSC-modified OFL probability distribution, the application of the Council risk policy, and a constant average ABC for 2022-2024. The FMP specifies that the annual catch limit (ACL) equals the ABC. Staff recommend an annual catch target (ACT) = ACL of 1,964,319 pounds (891 mt) for each year (i.e., no reduction for management uncertainty). After removing projected discards, the resulting IFQ quota is 1,866,103 pounds (846.450 mt) and the incidental category quota is 80,811 pounds (36.655 mt) for each year.

Staff do not recommend any changes to the current recreational possession limit (8-fish per angler per trip with no minimum size), or incidental trip limit (500 pounds (227 kg) or 50 percent, by weight, of all fish, including the golden tilefish, on board the vessel, whichever is less).

¹ A golden tilefish research track stock assessment is scheduled for spring of 2024. This research track assessment will be used to set specifications for 2025, 2026, and 2027.

² 1 mt = 2,204.6226 pounds.

Introduction

The Magnuson-Stevens Act requires each Council's SSC (Scientific and Statistical Committee) to provide ongoing scientific advice for fishery management decisions, including recommendations for ABC, preventing overfishing, and maximum sustainable yield. The Council's catch limit recommendations for the upcoming fishing year(s) cannot exceed the ABC recommendation of the SSC. In addition, the Monitoring Committee (MC) established by the Fishery Management Plan (FMP) is responsible for developing recommendations for management measures designed to achieve the recommended catch limits.

Multi-year specifications may be set for golden tilefish for up to three years at a time. The SSC must recommend ABCs that addresses scientific uncertainty, while the MC must recommend ACTs that address management uncertainty. Based on the SSC and MC recommendations, the Council will make a recommendation to the National Marine Fisheries Service (NMFS) Greater Atlantic Regional Administrator. In this memorandum, information is presented to assist the SSC and MC in developing recommendations for the Council to consider for the 2022-2024 fishing years for golden tilefish.

Additional relevant information about fishery performance and past management measures is presented in the 2021 Golden Tilefish Fishery Information Document prepared by Council staff and the 2021 Fishery Performance Report developed by the Council Tilefish Advisory Panel. The NMFS Northeast Fisheries Science Center (NEFSC) provided the 2021 Golden Tilefish Management Track Assessment to support this specifications process (Nitschke 2021a).³

Catch and Landings Update

Commercial landings (calendar year) from 1970 to 2020 are presented graphically in Figure 1 of the 2021 Golden Tilefish Fishery Information Document (FID; MAFMC 2021a) and landings for fishing years 2005 through 2020 are presented in Table 1 below. Except for 2010 fishing year, commercial golden tilefish landings have been below the commercial quota specified each year since the IFQ system was first implemented in 2009.

Commercial discards are described in the FID (page 15). According to VTR data, no discarding was reported by longline vessels that targeted tilefish for the 2018 through 2020 period (Table 11 of the FID). According to the "Discard Estimation, Precision, and Sample Size Analysis" conducted by the NEFSC, discard estimations for commercial fisheries (mostly large/small mesh trawls and gillnets) appears to be low (several metric tons per gear type).⁴ For the last five years (2016-2020), on average 17,405 pounds (7.895 mt) of tilefish were discarded.

Recreational catches and landings are described in the FID (pages 19-24). A small recreational fishery briefly occurred during the mid-1970's, with less than 100,000 pounds annually (MAFMC 2000). Recreational catches have been low for the 1982 - 2020 period, ranging from zero for most years to approximately over 200,000 fish in 2010 according to NMFS recreational statistics (Table 13 of the FID). VTR data indicates that the number of tilefish caught by party/charter vessels from Maine through Virginia is low, ranging from 81 fish in 1996 to 8,297 fish in 2015 (Table 14 of the FID). On average, 2,562 tilefish were caught by party/charter vessels during the 1996-2020 period.

³ These documents are available at: <https://www.mafmc.org/council-events/2021/ssc-july-21-23>

⁴ 2016-2020 Discard Estimation, Precision, and Sample Size Analysis. <http://www.nefsc.noaa.gov/femad/fsb/SBRM/>

In 2020, party/charter boats reported 3,466 fish landed, a 36% decrease from 2019 (5,424 fish landed). The industry experienced cancellations of for-hire overnight trips in 2020 due to the COVID-19 pandemic. Furthermore, in 2020, tuna fishing was better than average, which resulted in less boats targeting golden tilefish. As a general rule, when tuna fishing is not good, anglers offset those trips by targeting tilefish (MAFMC 2021b).

Recreational catches have been traditionally considered an insignificant component of the removals and not included into the assessment. To improve tilefish management and reporting, GARFO implemented mandatory private recreational permitting and reporting for tilefish anglers in August 2020. This action was approved in late 2017, but with delayed implementation. Outreach materials and webinars were provided by GARFO and the Council leading up to the final rule and will continue to be circulated as these regulations become commonplace. Given these requirements have only been in place since August 2020, the following data should be considered preliminary. As of February 1, 2021, 340 tilefish permits have been issued for private recreational anglers. This permit allows recreational anglers to land both golden and blue line tilefish. For the 2020 fishing year, 50 golden tilefish were reported landed on 4 private recreational trips (with 5 fish discarded). The low landings associated with private anglers may be attributed to the short fishing season (as a result of when implementation occurred), this being the first-time recreational anglers are required to report.

Review of SSC Recommendations from March 2020

In March 2020, the SSC meet to recommend an ABC for tilefish for 2021 and 2022 (interim). Given the implementation of the new stock assessment review process approved by the Northeast Regional Coordinating Council (NRCC), a management track stock assessment was not expected to be available until June 2021. The previous stock assessment update, conducted in 2017, provided the basis for ABCs through October 31, 2020. As a result, the SSC was asked to recommend an ABC for 2021 and an interim ABC for 2022. The interim 2022 ABC was expected to be replaced with updated Overfishing Limits (OFL) and resultant ABCs following the June 2021 assessment peer review. The 2021 management track assessment would then be used to revise the interim 2022 specifications and set specifications for the 2023 and 2024 fishing seasons. The interim 2022 measures also provide a placeholder in the event that there is insufficient administrative time for Council approval and rulemaking for the start of the 2022 fishing year (i.e., November 1, 2021).

“The SSC noted the difficulties of this process from the perspective of scientific uncertainty, wherein ABCs in 2022 are being set by model results from 2017. However, the expected joint availability of results from a 2021 assessment update and the 2020 cooperative fishery independent golden tilefish longline survey was reassuring to the SSC. No compelling evidence from either the data update or the reports from the Advisory Panel suggested the need to change the current ABC. The SSC noted that this is a textbook example of an equilibrium fishery, with stable catches, high constant prices, stable seasonal supply, and low levels of discards. Past assessments have revealed that the fishery depends on the periodic recruitment of year classes. As a result, the CPUE is characterized by cycles of increasing and decreasing stanzas. Currently much of the fishery is dependent on the 2013 year class and, based on historical patterns, further increases in CPUE are expected.”

Table 1. Summary of management measures and landings for fishing year 2005-2022.^a

Management Measures	2005	2006	2007	2008	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	1.995	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	1.995	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)	1.497	1.898	1.777	1.672	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)	-0.498	-0.097	-0.218	-0.323	-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)	133	300	300	300	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

^a Fishing year 2005 (November 1, 2004 through October 31, 2005). ^b Eight fish per person per trip. *The Council requested for emergency action to allow unharvested 2020 IFQ pounds to be carried over into the 2021 fishing year, up to 5 percent of the quota shareholders initial 2020 allocation.

The SSC agreed with the MAFMC Staff recommendation for *status quo* ABC in 2021 and 2022 at a level of 1,635,830 pounds (742 mt). The SSC expressed both positive and negative factors regarding the interim measures for 2022 with respect to their uncertainty including:

- No major evidence commercial and recreational fisheries that stock conditions have changed substantially.
- Absence of direct evidence of new recruitment.
- An observed a decline in recreational harvest but explained by decline in effort due to weather. Overall, the Committee expressed concerns about precision of recreational catch but noted that a new recreational fishing permitting and reporting initiative may improve quality of estimates.
- CPUE in the commercial fishery has been increasing over the past 4-5 years.

2021 Golden Tilefish Management Track Assessment

Biological Reference Points

The biological reference points for golden tilefish were updated during the 2021 management track assessment (Nitschke 2021a). The fishing mortality threshold for golden tilefish is $F_{40\%}$ (as F_{MSY} proxy) = 0.261, and $SSB_{40\%}$ (SSB_{MSY} proxy) is 24.23 million pounds (10,995 mt).

Stock Status

The latest assessment indicates that the golden tilefish stock was not overfished and overfishing was not occurring in 2020, relative to the newly updated biological reference points. Fishing mortality in 2020 was estimated at $F=0.160$; 39% below the fishing mortality threshold of $F=0.261$ (F_{MSY} proxy). SSB in 2020 was estimated at 23.28 million pounds (10,562 mt), and was at 96% of the biomass target (SSB_{MSY} proxy).

Advisory Panel Fishery Performance Report

Advisors meet on February 17 to develop the 2021 Fishery Performance Report.⁵ A summary of key issues is presented below.

- Large reduction in the demand for golden tilefish with restaurant closures due to COVID-19.
- Large price reduction at the beginning of the pandemic. Prices are better now.
- Industry continues to spread landings throughout the year to stabilize price.
- In regard to the CPUE increase in 2020. Industry indicated that more fish are being landed with the same trip effort than were caught in 2019.
- For-hire effort was reduced in 2020 due to COVID-19, and industry is experiencing the same for 2021.
- The 2020 tuna fishing season was better than average, resulting in less boats targeting golden tilefish.
- Concerns over the low numbers reported under the new private reporting system.
- Concerns over the lack of biological sampling if fish on the dock.

⁵ This document is available at: <https://www.mafmc.org/council-events/2021/ssc-july-21-23>

- AP members indicated support for the proposed Council work to initiate a golden tilefish multi-year specifications framework as listed under the 2021 Council proposed actions and deliverables. They support changing the current fishing year (November 1 – October 31) to January 1 – December 31, as it will create more stability in terms of harvesting their full allocation.

Projections⁶ and Basics for 2022-2024 ABC Recommendation

Estimated 2022-2024 OFLs and ABCs following the Council’s risk policy assuming lognormal distributions CVs of 100% for time varying ABC (scenario 1) and average ABC (scenario 2) are shown in Table 2 below. The estimated fishing mortality and probability of overfishing and probability of being overfished are also given. The average constant ABC under scenario 2 was calculated from the average ABC derived from scenario 1. Both scenarios 1 and 2 result in near identical P* from year-to-year and an average P* of 0.45 for the entire 2022-2024 period. Also, a *status quo* scenario at the current ABC level was developed (scenario 5), resulting in an average P* of 0.35.

In addition, two other scenarios (scenarios 3 and 4) were developed for reference and comparison purposes only as they do not comply with the Council’s risk policy and/or the maximum number of years allowed for multi-year specifications setting. Under scenario 3, projections are set for 5 years using the Council’s risk policy assuming lognormal distribution CVs of 100% for time varying ABC. Scenario 3 provides projections for a longer time period (2022 through 2026) when compared to scenarios 1, 2, and 5 above. Overall, scenario 3 shows that the OFL decreases from 2022 to 2025 and then increases again in 2026, with an average P* of 0.45 for the entire projection period. Lastly, scenario 4 is not based on projections; it is based on a biomass at SSB_{MSY} and simply assumes a constant ABC. Scenario 4 also has an average P* of 0.45 for the entire projection period.

Staff recommend measures be developed for 3-years, the maximum under the FMP to provide for continued stability in the fishery and markets.

Staff recommend ABCs for 2022-2024 consistent with the projection methodology under scenario 2. The recommended ABC in each 2022, 2023, and 2024 is 1,964,319 pounds (891 mt) based on modified OFL probability distributions with CV of 100% and a risk policy to set a constant average ABC for 2022-2024; current stock status; average projected $SSB/SSB_{MSY} = 102\%$ for the 2022-2024 period; and provide for continued stability in the fishery and markets (Table 3 below). Overall, for the last several specifications cycles, the Council has set constant year-to-year catch and landings limits (Table 1 above). The relatively stability of the population, stock dynamics, and fishery also lend itself to a constant catch and landings limits approach. In addition, industry members have argued that a constant quota or landings level allow them to better plan fishing operations and allow for continued stability in the fishery and markets when compared to a variable quota or landings level from year-to-year.

⁶ The approach used to specify biomass projections assumes that the ABC was caught in the preceding year. The ABC in the current year is then updated based on the assumed catch.

Table 2. Golden tilefish projected OFL and ABC (in mt) levels and associated fishing mortalities for 2022-2024.

Scenario 1		100% CV					projection probability			
year	OFL	ABC	SSB/SSB _{MSY}	ABC/OFL	p*	CV	F	overfishing	overfished	
2022	1,011	867	0.95	0.86	0.43	100%	0.22	0.28	0.02	
2023	1,013	917	1.03	0.91	0.45	100%	0.24	0.35	0.01	
2024	975	890	1.08	0.91	0.46	100%	0.24	0.38	0.01	
avg	1,000	891	1.02	0.89	0.45		0.23	0.34	0.01	
Scenario 2		891 constant avg 100% CV					projection probability			
year	OFL	ABC	SSB/SSB _{MSY}	ABC/OFL	p*	CV	F	overfishing	overfished	
2022	1,011	891	0.95	0.88	0.44	100%	0.23	0.32	0.02	
2023	1,010	891	1.03	0.88	0.44	100%	0.23	0.32	0.01	
2024	976	891	1.08	0.91	0.46	100%	0.24	0.38	0.01	
avg	999	891	1.02	0.89	0.45		0.23	0.34	0.01	
Scenario 3		5 year 100% CV					projection probability			
year	OFL	ABC	SSB/SSB _{MSY}	ABC/OFL	p*	CV	F	overfishing	overfished	
2022	1,011	867	0.95	0.86	0.43	100%	0.22	0.28	0.02	
2023	1,013	917	1.03	0.91	0.45	100%	0.24	0.35	0.01	
2024	975	890	1.08	0.91	0.46	100%	0.24	0.38	0.01	
2025	959	872	1.06	0.91	0.45	100%	0.24	0.36	0.01	
2026	971	882	1.05	0.91	0.45	100%	0.24	0.35	0.01	
avg	986	886	1.03	0.90	0.45		0.23	0.34	0.01	
Scenario 4		SSB _{MSY} constant 100% CV					projection probability			
year	OFL	ABC	SSB/SSB _{MSY}	ABC/OFL	p*	CV	F	overfishing	overfished	
2022	935	842	1.00	0.90	0.45	100%	0.22	0.25	0.02	
2023	935	842	1.00	0.90	0.45	100%	0.21	0.25	0.01	
2024	935	842	1.00	0.90	0.45	100%	0.22	0.30	0.01	
avg	935	842	1.00	0.90	0.45		0.22	0.26	0.01	
Scenario 5		742 constant status quo 100% CV					projection probability			
year	OFL	ABC	SSB/SSB _{MSY}	ABC/OFL	p*	CV	F	overfishing	overfished	
2022	1,011	742	0.95	0.73	0.36	100%	0.19	0.11	0.02	
2023	1,031	742	1.05	0.72	0.35	100%	0.18	0.11	0.01	
2024	1,012	742	1.11	0.73	0.36	100%	0.19	0.13	0.00	
avg	1,018	742	1.04	0.73	0.35		0.19	0.12	0.01	

Source: Paul Nitschke, Personal Communication. 2021b. Note: The approach used to specify biomass projections assumes that the ABC was caught in the preceding year. The OFL and ABC in the current year is then updated based on the assumed catch. Scenarios 3 and 4 were developed for reference and comparison purposes only as they do not comply with the Council's risk policy and/or the maximum number of years allowed for multi-year specifications setting. Scenarios 2 and 5 are based on constant catch projections and not from an ABC determination from the OFL. Scenario 4 is not based on projections; it is based on a biomass at SSB_{MSY} and simply assumes a constant ABC.

Other Management Measures

Annual Catch Limits

As defined in the Framework Adjustment 2 to the Tilefish FMP, ABC is equivalent to the total allowable catch (ACL; Figure 1 below). Table 3 below shows the ACLs associated with the staff recommendations for ABC based on assuming lognormal distributions CVs of 100% for an average ABC, for tilefish. Table 4 below shows the catch and landings limits for the current specifications cycle (2021 and 2022 interim).

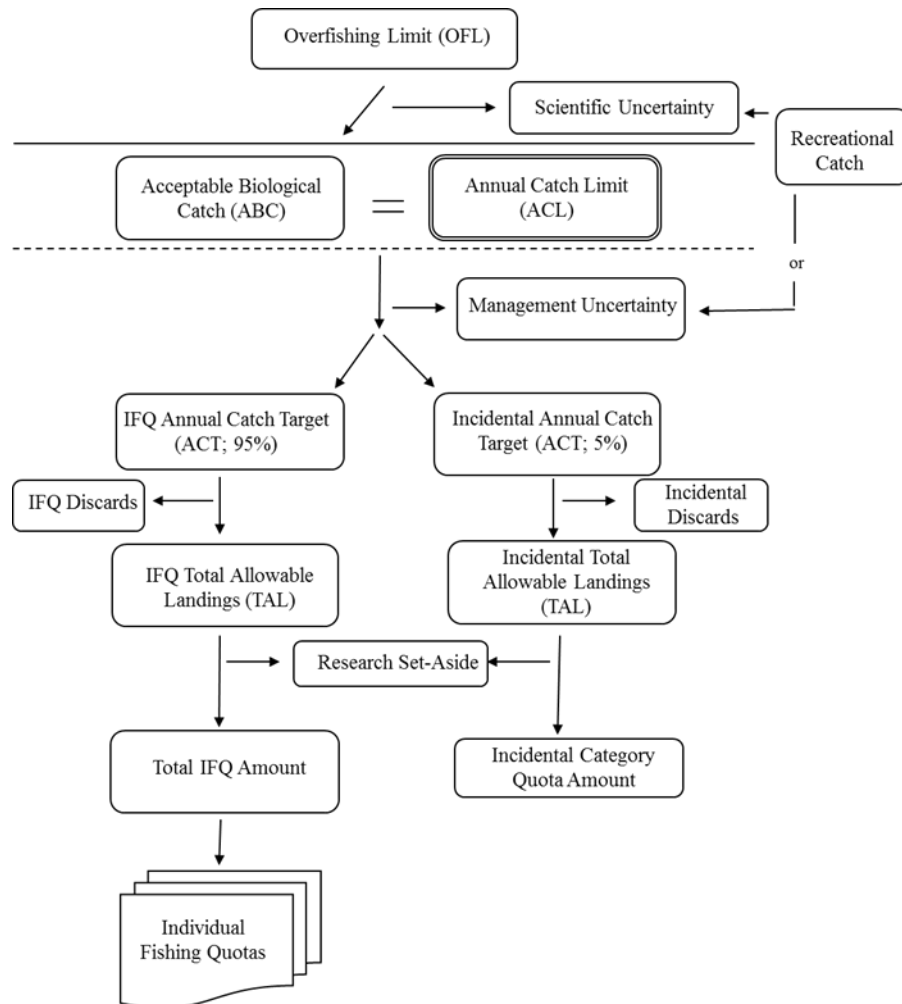


Figure 1. Flowchart for golden tilefish catch and landings limits.

Table 3. Staff 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	1,866,103 (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.

Note: Initial OFL and ABC values are in metric tons (mt) and thus, the management measures are developed using mt. When values are converted to millions of pounds the numbers may change due to rounding. Projected incidental discards are initially reported in pounds and then converted to mt. 1 mt = 2,204.6226 pounds.

Table 4. Catch and landings limits (in pounds unless otherwise noted) for the current specifications cycle (2021-2022).

	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)	1.631 m lb (740 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

*ABC values are typically reported in metric tons (mt) and thus, the management measures are developed using mt. When values are converted to millions of pounds (m lb) the numbers may change due to rounding. Projected incidental discards are initially reported in pounds and then converted to mt. 1 mt = 2,204.6226 pounds. **Due to the COVID-19 national emergency, the Council requested the service to consider an emergency action to allow a 5% rollover of unused IFQ 2020 quota allocation for the golden tilefish fishing year November 1, 2020 through October 31, 2021. Only the IFQ TAL would be affected by the requested emergency carryover. All other specifications would remain at proposed 2021 values.

Annual Catch Targets

The Tilefish MC is responsible for recommending ACTs for the IFQ and incidental sectors of the fishery, which are intended to account for management uncertainty, for the Council to consider. The ACTs, technical basis for ACTs considerations, sources of management uncertainty should be described and technical approaches to mitigating these sources of uncertainty should be defined and provided to the Council. The relationship between the ACTs and other catch/landing components are given in Figure 1 above.

Management uncertainty is comprised of two parts: uncertainty in the ability of managers to control catch and uncertainty in quantifying the true catch (i.e., estimation errors). Management uncertainty can occur because of a lack of sufficient information about the catch (e.g., due to late reporting, underreporting, and/or misreporting of landings or discards) or because of a lack of management precision (i.e., the ability to constrain catch to desired levels).

Staff recommend the MC consider past specific landings performance, as a basis for quantifying management uncertainty (i.e., implementation error) and as an indicator of future ability to achieve catch target when developing the 2022-2024 ACT recommendation for the IFQ and incidental sectors (Table 3 above). The MC should also consider the potential imprecision/variability in expected observed commercial and recreational catch to ensure the ACLs are not exceeded.

The tilefish fishery is managed via an IFQ system and managers believe that all tilefish commercial landings values under this program are reliable. The IFQ monitoring system is timely and successful in managing the landings. The commercial landings performance for the last 10 years has been near or below the commercial quotas (Table 1 above). The recreational catch is minimal.⁷ Staff recommend no reduction in catch from the ACL. The recommended ACTs in each 2022, 2023, and 2024 are 1,866,103 pounds (846 mt) for the IFQ fishery and 98,216 pounds (45 mt) for the incidental fishery (Table 3 above).

Total Allowable Landings

Management uncertainty can occur because of insufficient information about discards (Figure 1 above). Development of a time series of discards was not done in prior assessment models since discarding was considered negligible and information on discards do not exist for most of the time series. Therefore, discards have not been included in the assessment due to the high uncertainty associated with the discard estimates over the time series. Very low or insignificant discards have been estimated for recent years according to the discard estimation, precision, and sample size analysis conducted by the NEFSC. There is higher uncertainty (CVs) on the low recent discard estimates since the discarding of tilefish is a rare event on observed trips. Therefore, an average of several years was used to judge recent relative magnitude of discarding for this fishery. For the last five years (2016-2020), on average 17,405 pounds (7.895 mt) of tilefish were discarded according to the discard estimation, precision, and sample size analysis conducted by the NEFSC. Commercial discards are not generated by the IFQ fishery due to the fact that all fish caught (given the standard hook size/type use by the industry) are marketable. In addition, even though there is a price differential for various sizes of golden tilefish landed, golden tilefish fishermen land all fish caught as the survival rate of discarded fish is very low (Nolan, pers. comm. 2006; Kitts et al. 2007). Furthermore, Amendment 1 to the Tilefish FMP prohibited the practice of highgrading (MAFMC 2009). It is estimated that most of the discards that have occurred in recent years have been by large/small mesh trawls and gillnets used by the incidental fishery. Staff recommend a reduction in catch from the incidental ACT to account for discards in that component of the fishery. Staff recommends no reduction in catch from the IFQ ACT. The recommended IFQ TAL is 1,866,103 pounds (846.450 mt) and the resulting incidental TAL is 80,811 pounds (36.665 mt) for each 2022, 2023, and 2024 (Table 3 above).

Adjusted IFQ TAL and Incidental TAL for 2022

The Council is in the process of developing a framework document that considers measures to revise the specifications process by considering the duration for setting multi-year management measures and the timing of the fishing year. At the first framework meeting (April 2021), the Council selected preferred alternatives for these two process related issues. Regarding the issue of the timing of the fishing year, the Council selected an alternative that sets the golden tilefish fishing

⁷ Recreational tilefish trips appear to be limited and a minor component of the catch as indicated in the FID, the FPR, and the 2021 Golden Tilefish Management Trach Assessment (Nitschke 2021a).

year as the 12-month period beginning with January 1, annually. Therefore, the fishing year will be from January 1 – December 31 (compared to the current November 1 – October 31 fishing year). The other action would modify the annual specifications process, so that they could be set for the maximum number of years needed to be consistent with the NRCC approved stock assessment schedule. In addition, this framework will set new specifications (catch and landings limits) for 2022-2024.

To facilitate the transition from the current fishing year (November 1 through October 31) to January 1 to December 31, a one-time only adjustment to bridge the gap will be necessary. More specifically, the 2022 fishing year will be extended from November 1, 2021 to December 31, 2022 (14-month period). Then, for 2023 and 2024, the Council would implement specifications starting on January 1 and ending in December 31.

When the staff recommended overall commercial quota for 2022 of 1,946,914 pounds is compared to the overall initial quota for 2021 (1,624,305 pounds), it results in a 20% increase in the quota level between those two periods. In order to make a more robust comparison of quota changes as result of the proposed staff recommendations during the gap year, the fishing year quotas for 2021 and 2022 are broken down to a common monthly denominator basis to assess impacts of the 14-month 2022 fishing year compared to 2021 12-month fishing year. The current 2021 overall commercial quota of 1,624,305 pounds is equivalent to 135,359 pounds/month (1,624,305 pounds / 12 months) and the 2022 overall staff recommend quota is equivalent to 139,065 pounds/month (1,946,914 pounds / 14 months). Therefore, on a common monthly denominator basis, the overall commercial quota is increased by only 3% in gap 2022 fishing year compared to 2021 fishing year. For each, 2023 and 2024, the overall commercial quota is 20% higher compared to 2021 fishing year.

Recreational Bag Limit

A recreational bag limit was implemented under Amendment 1 in 2009 (MAFMC 2009). Current regulations require an 8-fish recreational bag-size limit per angler per trip. This limit was set at the upper range of mean effort observed during the 1996-2005 period. VTR data indicates that mean effort for the 2006 to 2020 period has ranged from 1.2 to 4.6 fish per angler. In 2020, mean effort was 3.2 fish per angler. The recreational bag limit may be changed based on the recommendations of the MC. Staff does not recommend any changes to the recreational bag limit.

Incidental Trip Limit

When the Council created the tilefish IFQ system, it allocated a separate quota and commercial possession limit to allow small landings of tilefish caught by non-IFQ vessels targeting other species. The current 500 pound incidental trip limit has been in place since 2012 (Table 1 above). Framework Adjustment 2 to the Tilefish FMP (implemented in 2018) adjusted the commercial golden tilefish landing limit to: 500 pounds (227 kg) or 50 percent, by weight, of all fish, including the golden tilefish, on board the vessel, whichever is less. This was an effort to ensure that the incidental fishery functions as originally intended, the Framework Adjustment 2 action modified the commercial possession limit to ensure that vessels are targeting other species, and only incidentally catching golden tilefish.

Fishing regulations state that if the incidental harvest exceeds the incidental TAL for a given fishing year, the incidental trip limit specified may be reduced in the following fishing year. In

addition, the harvest of the tilefish incidental TAL monitoring is based on dealer reports and other available information, and determines the date when the incidental tilefish TAL has been landed. The Regional Administrator publishes a notice in the Federal Register notifying vessel and dealer permit holders that, effective upon a specific date, the incidental tilefish fishery is closed (in-season closure of the incidental fishery) for the remainder of the fishing year. Golden tilefish incidental commercial fishery landings in 2021 fishing year are slightly ahead of 2020 fishing year landings for the same time period (Figure 2 below). As of June 9, 2021, 20,921 pounds of incidentally caught tilefish have been reported (approximately 30% of the 70,548 pounds incidental quota). Incidental golden tilefish commercial landings for the last eight fishing years are shown in Table 12 below. Staff does not recommend any changes to the incidental trip limit.

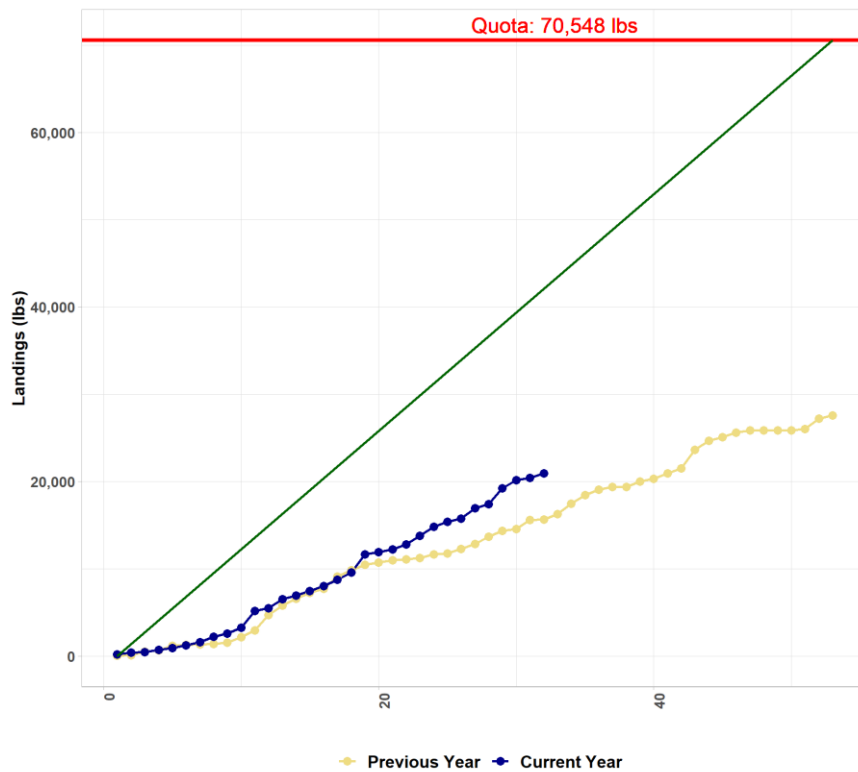


Figure 2. Incidental commercial landings for 2022 fishing year to date (for data reported through June 9, 2021/2021). Blue Line = fishing year 2021, Yellow Line = fishing year 2020. Source: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/quota-monitoring-greater-atlantic-region>

Table 12. Incidental golden tilefish commercial landings for fishing year 2013-2020.

Fishing year	Landings (pounds)	Incidental quota (pounds)	Percent of quota landed (%)
2013	36,442	99,750	37
2014	44,594	99,750	45
2015	18,839	87,744	21
2016	20,929	94,357	22
2017	60,409	94,357	64
2018	61,254	72,752	84
2019	22,246	72,752	31
2020	25,864	70,548	37

Source: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/quota-monitoring-greater-atlantic-region>.

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