

Mid-Atlantic Recreational Tilefish Permitting and Reporting: Program Evaluation



Photo: Ken Neill

Prepared for:
Mid-Atlantic Fishery Management Council

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PREFACE

The Project

The Mid-Atlantic Fishery Management Council (“Council” or MAFMC) seeks to ensure that the Mid-Atlantic Recreational Tilefish Permitting and Reporting Program is established as a useful, credible, and sustainable source of recreational fishing catch and effort data, and that resources and political will are not wasted on an ineffective program. The purpose of this program evaluation was to identify factors that would increase angler participation in the program, thereby enabling incorporation of self-reported landings and/or effort data into the golden and blue line tilefish stock assessment and management processes. This program evaluation highlights opportunities for ongoing improvement that would enable fishery managers to maximize effectiveness of the program. More broadly, improving this program could provide a model for implementation of self-reporting programs in other, larger, recreational fisheries, where appropriate.

The Process

Willy Goldsmith (Pelagic Strategies, LLC) and Jill Stevenson (Stevenson Sustainability Consulting, LLC) were contracted to conduct the program evaluation, with particular emphasis on soliciting perspectives from recreational tilefish fishery community leaders. We identified leaders in the Mid-Atlantic recreational tilefish fishery and facilitated focus groups in March and April 2024 in the following five locations:

- West Islip, NY
- Wildwood, NJ
- Brick, NJ
- Ocean City, MD
- Virginia Beach, VA



Photo: Willy Goldsmith

Focus group participants (4-7 per meeting) represented a broad range of experience and perspectives on the fishery and generally belonged to one or more of the following categories:

- Private vessel owners or hired captains;
- Tilefish anglers who fish on others' private vessels;
- Charter captains;
- Leaders of fishing clubs with many tilefish anglers; and
- Owners/employees of tackle shops that cater to tilefish anglers.

To address circumstances and challenges emphasized by focus group participants, we expanded the scope of our program evaluation to evaluate all perspectives ("domains of influence"). This resulted in completion of semi-structured interviews with staff from the Council and the following NOAA Fisheries offices: Atlantic Highly Migratory Species Management Division (HMS Division); Greater Atlantic Regional Fisheries Office (GARFO); Northeast Fisheries Science Center (NEFSC); and Office of Law Enforcement (OLE). Through these conversations, we learned their perspectives on the strengths and weaknesses of the program, barriers to change, and potential opportunities for improvement.

Acknowledgements

The authors, Willy Goldsmith and Jill Stevenson, are grateful for the considered opinions of many recreational tilefish fishermen and associated individuals in New York, New Jersey, Delaware, Maryland, and Virginia. Many conversations were shared before, during, and after focus group meetings and we appreciated the solutions-oriented approach of many of the focus group participants.

In addition, the following experts provided their insights into the Recreational Tilefish Permitting and Reporting Program. However, their participation in interviews does not reflect their endorsement of the findings and recommendations of this report:

Sarah Bland, Deputy Regional Administrator, NOAA Fisheries GARFO

Caleb Gilbert, Compliance Liaison, Northeast Region, NOAA OLE

Hannah Hart, Blueline Tilefish Fishery Management Plan Coordinator, MAFMC

Ted Hawes, Permits and Limited Access Programs Branch Chief, NOAA Fisheries GARFO

Cliff Hutt, Recreational Fishing Coordinator, NOAA Fisheries HMS Division

José Montañez, Golden Tilefish Fishery Management Plan Coordinator, MAFMC

Paul Nitschke, Stock Assessment Lead, Golden Tilefish, NOAA Fisheries NEFSC

Doug Potts, Fishery Policy Analyst for Golden and Blueline Tilefish Fishery Management Plans, NOAA Fisheries GARFO

Mary Sabo, Communications Program Coordinator, MAFMC

Jackie Wilson, Fishery Management Plan Specialist, NOAA Fisheries HMS Division



Photo: Ken Neill

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EXECUTIVE SUMMARY

Since August 2020, private recreational golden and blueline tilefish fishing vessel owners from Virginia northward have been required to obtain a mandatory (free) permit and submit electronic trip reports, with the goal of improving data streams for these data-poor stocks. Relatively few fishermen have complied. While the Mid-Atlantic Fishery Management Council does not itself implement data collection programs, Council staff addressed concerns about low participation by hiring outside consultants to conduct a program evaluation. Understanding program successes and failures can lead to reducing uncertainty in fisheries science and management, and is particularly needed in this case, given the novelty of implementing a mandatory reporting program in a Mid-Atlantic private recreational fishery.

Focus group discussions with recreational tilefish community leaders in communities ranging from New York to Virginia, facilitated by Willy Goldsmith and Jill Stevenson, provided a broad overview of stakeholder perceptions of the Recreational Tilefish Permitting and Reporting Program. Semi-structured conversations with fishery managers provided additional background.

Over the course of this program evaluation, we generally concluded that:

- Notifying private recreational fishermen about new or ongoing reporting requirements demands strategic and ongoing direct and indirect communication methods;
- Ineffective or minimal communication with fishermen has resulted in their mistrust of fishery managers, fueling non-compliant attitudes and jeopardizing their participation in the broader fishery management process;
- The quality of private recreational tilefish landings and effort data reported to date is currently considered poor by fishery participants due to confusion on how to report, lack of trust/clarity regarding how data will be used, and complexity/quantity of the information that must be reported;
- Lack of enforcement or enforcement penalties has likely contributed to continued apathy by tilefish anglers towards the permitting and reporting requirements;
- Organizational fishery management silos involved in tilefish science and management have prevented effective collaboration, leading to poor communication and frustration while creating inefficiencies;
- Failure to establish a vision and goals for this data collection program and to track progress in this small and specialized fishery has limited program success to date, which has undermined stakeholder confidence in the data collection and management process.

Recommendations to improve this program are organized under five overarching themes:

- Theme I: Building Awareness and Developing Trusting Relationships
- Theme II: Improving the Data Collection Component
- Theme III: Envisioning Enforcement as a Strategic Catalyst
- Theme IV: Collaborating Across Management Entities to Maximize Efficiency and Effectiveness
- Theme V: Strategic Program Development and Assessment

SUMMARY OF RECOMMENDATIONS (in order of general priority/timeliness)

Theme I: Building Awareness and Developing Trusting Relationships

Recommendation 1: Prioritize outreach. Ask the recreational tilefish fishing community for help. GARFO staff should increase awareness of the permitting and reporting program, including the eFin Logbook option for reporting. Multiple short- and long-term outreach strategies are detailed in Appendix 1.

Recommendation 2: Increase two-way communications. GARFO and MAFMC staff should build and maintain trusting relationships and generally increase engagement by regularly communicating with these stakeholders.

Theme II: Improving the Data Collection Component

Recommendation 3: Explore the need for regulatory changes to simplify/eliminate the requirement to report fishing effort. Ask for input early and often from the tilefish fishing community. GARFO and NEFSC staff should convene to evaluate the need for regulatory changes, including reducing requirements for effort data submission, in order to increase the quality of data collected. Note: This change would require MAFMC action.

Recommendation 4: Alter the contents, language, and layout of the eFin Logbook app. Publicize changes. MAFMC staff, with support from GARFO staff, should amend the recreational tilefish self-reporting app to improve the user experience and improve data quality/utility.

Theme III: Envisioning Enforcement as a Strategic Catalyst

Recommendation 5: Develop an enforcement strategy. Publicize the strategy and results. NOAA's Office of Law Enforcement and Joint Enforcement Agreement partners should identify a period of compliance assistance and then commence enforcing these requirements, consistent with penalties for violating recreational HMS regulations.

Theme IV: Collaborating to Maximize Efficiency and Effectiveness

Recommendation 6: Increase communication and collaboration among relevant fishery managers and communications staff. GARFO fishery managers should secure efficiencies and increase overall effectiveness by leveraging fishery management resources/skills, sharing information, and developing unified communications strategies with other science/management entities.

Recommendation 7: Invest in external partnerships. MAFMC and GARFO should develop and/or strengthen partnerships with tilefish fishery and business leaders, state fishery managers, dockside samplers, and port agents to increase visibility of the recreational tilefish program, build trust with participants, and achieve other common goals.

Theme V: Strategic Program Development and Assessment

Recommendation 8: Develop clear programmatic goals and evaluate progress. Ask for fishing community input; publicize findings. NEFSC and GARFO should jointly establish a set of performance standards for desired levels of angler recruitment, retention, and data submission, and annually evaluate the tilefish recreational data collection program to advance progress towards goals.

INTRODUCTION

Description of the Problem

In August 2020, NOAA Fisheries implemented regulations reflecting the Council's recommendation to establish a mandatory Recreational Tilefish Permitting and Reporting Program for the Mid-Atlantic stocks (Maine to Virginia) of golden and blueline tilefish.¹ Due to their deep-water habitat and unique life-history (e.g., burrowing behavior) which makes them largely inaccessible to conventional fishery-independent survey methods, the Mid-Atlantic stocks of both tilefish species are considered data-poor, making effective assessment and management challenging. Estimating private recreational catch and effort for these species, which are rarely captured during dockside intercept surveys, has proven particularly challenging and has been recognized as a key data gap by both fisheries scientists and managers. The Recreational Tilefish Permitting and Reporting Program was established with the goal of improving recreational data streams for these data-poor stocks.

Since the program's implementation, private vessel owners have been required to obtain the free permit annually via GARFO's Fish Online website and to submit electronic trip reports summarizing tilefish catch and effort within 24 hours of returning from a trip on which they fished for tilefish, even if no tilefish were caught.² Permit-holders can report effort and catch via several options that had already been developed for electronic commercial reporting, including Fish Online and the Standard Atlantic Fisheries Information System (SAFIS) eTrips platform.³ In addition, prior to program implementation, the Council contracted with Harbor Light Software to develop a reporting application specifically for recreational tilefish reporting. The application, eFin Logbook,⁴ was certified by GARFO in August 2020. The Council initially identified the need for the permitting and reporting program, conducted scoping, and approved its implementation; however, GARFO is the entity responsible for ongoing management of the program, including program outreach, administration, and review.

While the number of anglers who have acquired the permit has increased each year since the program's inception, it is suspected that only a very small proportion of tilefish anglers have acquired it. Of those who *have* acquired the permit, a substantial percentage are not *renewing* their permits: Over 30% of anglers who obtained the permit in 2022 did not renew it for 2023 (Table 1).

¹ 85 FR 43149, July 16, 2020. Available at:

<https://www.federalregister.gov/documents/2020/07/16/2020-14853/fisheries-of-the-northeastern-united-states-permitting-and-reporting-for-private-recreational>.

² Additional details can be found on the Council's website: <https://www.mafmc.org/rec-tilefish-evtr>.

³ Additional reporting options can be found here:

<https://www.fisheries.noaa.gov/new-england-mid-atlantic/resources-fishing/electronic-vessel-trip-reporting-software-options>.

⁴ Additional details can be found on Harbor Light Software's website:

<https://www.harborlightsoftware.com/efin-logbook>.

Table 1. Private Recreational Tilefish Permits, 2020-2023. (Source: GARFO)

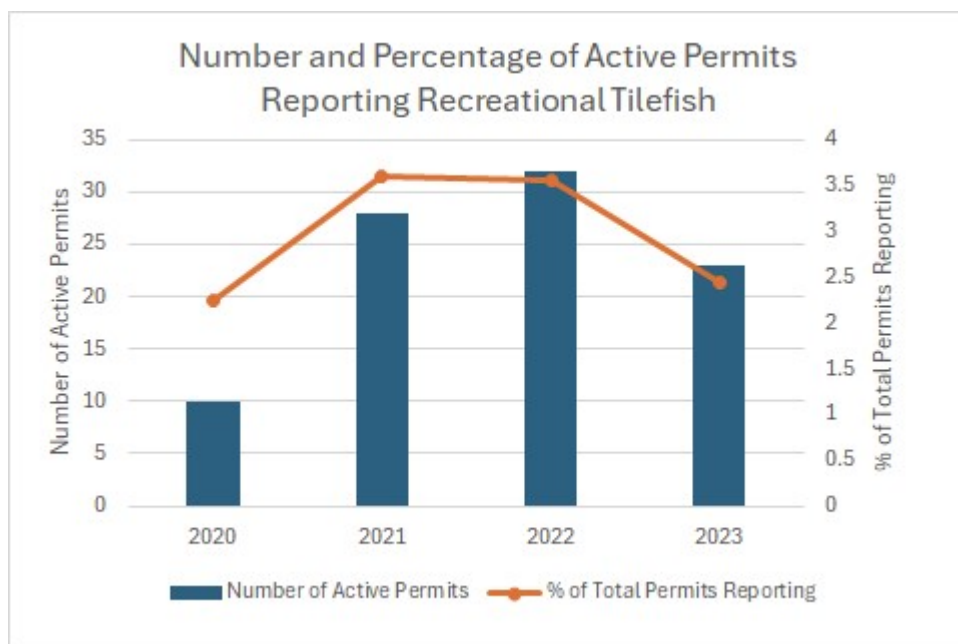


Private Recreational Tilefish Permits

AP YEAR	PERMITS	RENEWED	NEW	DID NOT RENEW
2020	447		447	
2021	779	364	415	83
2022	902	496	406	283
2023	946	620	326	282

Further exacerbating the issue of non-compliance is that of those who *have* obtained the permit, very few have *reported* tilefish landings and effort (2.4% of all permit-holders in 2023; Figure 1), with a total of only 1,995 tilefish (both species combined) reported landed from approximately 150 reported trips in the first four years of the program’s existence.

Figure 1. Number of and Percentage of Active Recreational Tilefish Permitted Vessels Reporting Tilefish.



Self-reported data collected under the program are currently unusable for stock assessment/management purposes. Despite investments in this program to date, stock assessment scientists are using other modes of recreational data collection for catch/effort estimation in tilefish stock assessments (e.g., Large Pelagics Survey [LPS], Marine Resource Information Program [MRIP], Delphi method⁵). Given the low number of issued permits and

⁵ Southwick and Associates, 2016. Estimated Catch of Blue-line Tilefish in the Mid-Atlantic Region. Application of the Delphi Survey Process. Available at: <https://www.mafmc.org/s/Mid-Atlantic-Blue-line-tilefish-Final-Report-10-March-2016-FINAL.PDF>.

subsequent trip reports, along with poor permit renewal rates, the program has yet to provide a complete picture of recreational tilefish fishing activities in the Mid-Atlantic. To better understand the source of these challenges and examine potential strategies to improve program success, Council staff initiated a program evaluation of the Recreational Tilefish Permitting and Reporting Program in the Spring of 2024.

Perceptions of the Fishery

The following description of the fishery is based on feedback received during focus group workshops. Structured focus group discussions centered around the following issues related to the private recreational tilefish data collection program:

- Implementation;
- Effectiveness;
- Underlying barriers to participation;
- Attitudes surrounding fishery permitting and reporting generally and specific to this program;
- Opportunities for increasing participation including enforcement and incentives;
- Effectiveness of the specialized tilefish reporting app (eFin Logbook); and
- Recommendations to improve the program.

Private anglers who target the Mid-Atlantic stocks of blueline and golden tilefish (from Virginia northward) predominantly do so in deep waters along the continental shelf or the shelf-slope break from Cape Cod, MA to Virginia Beach, VA. Much of the activity is concentrated around submarine canyons on the edge of the continental shelf.

While some particularly dedicated tilefish anglers take trips solely to target tilefish, the vast majority of tilefish private angling activities occurs in conjunction with trips targeting HMS such as tunas or billfish. Anglers may, for example, begin a trip by targeting HMS and then pivot to bottom-fishing for tilefish, either as part of a planned combination trip or due to lack of catch of HMS. Trips that solely target tilefish typically occur earlier in the season (Spring), before HMS become widely available in the Northeast and Mid-Atlantic. We heard that anglers in the fishery's northern region (from northern NJ northward) predominantly target golden tilefish, whereas anglers further south target a combination of blueline and golden tilefish. Private recreational anglers target tilefish using a combination of manual (hand-crank) and electric reels. Tilefish are rarely encountered while targeting other species, although golden tilefish are occasionally caught while targeting swordfish at depth during the day (i.e., "deep-dropping") and Maryland and Virginia anglers targeting black sea bass sometimes catch blueline tilefish.

Focus group participants generally believed that the popularity of the tilefish fishery has significantly increased in the past decade, concurrent with advances in technology (electronics, tackle, etc.), the rise in popularity of daytime deep-drop swordfish fishing, and the general ease of acquiring information (e.g., social media). Many anglers are concerned that the ensuing increase in effort and harvest is having notable (in some cases local-scale) negative impacts on tilefish populations (particularly golden tilefish), with anglers seeing both fewer and smaller fish.

FINDINGS AND RECOMMENDATIONS

Through our discussions with tilefish community leaders and Council/NOAA Fisheries staff and subsequent analysis, we identified both strengths (including recent successes) and weaknesses of the program, which are summarized below. The program is not achieving its goals as originally intended, largely due to lack of participation and concern by fishery scientists and managers about the reliability of data that are submitted. The following sections, listed in order of general priority/timeliness, highlight several major themes of our discussions with tilefish community leaders and staff involved in the program, along with recommendations to address program weaknesses. Because NOAA Fisheries is responsible for implementation of and compliance with the tilefish reporting program, most of the recommendations designed to improve effectiveness, efficiency, and transparency are largely directed toward NOAA staff, predominantly GARFO fishery managers and OLE.

Theme I: Building Awareness and Developing Trusting Relationships

A key component of fishery permitting and reporting requirements is outreach to ensure that affected stakeholders are aware of those requirements. Effective implementation of this program was impeded by multiple factors when it was launched in August 2020. These included interruption of outreach channels due to the COVID-19 pandemic and GARFO program staff's lack of familiarity with the recreational sector, which was compounded by their not leveraging the agency's and the Council's recreational fishery relationships and expertise. There have been missed opportunities for outreach and compliance assistance by enforcement personnel who often intercept HMS fishing trips but do not actively inquire about tilefish activities unless there are tilefish on board. Furthermore, at this time there is not a long-term outreach plan in place.

Many private anglers only participate in the HMS/tilefish fishery a dozen or fewer times per year; they are often not heavily engaged in fisheries science/management activities, and their main sources of information (or potentially misinformation) are frequently social media, fishing magazines, or other community resources. Council recognition of program limitations and consequent intervention to contract outreach and program evaluation services in Winter/Spring 2024 raised awareness of this program among tilefish fishery participants and provided general educational information for dissemination by focus group participants.

Many anglers who are aware of the program reportedly do not comply due to mistrust of fishery managers and concerns about future restrictions, despite understanding the importance of assessing the impact of recreational fishing on these data-poor species. Fishermen are more likely to trust fishery scientists and managers if they have a positive experience with another species (e.g., the black sea bass winter season in VA, which is made possible by a mandatory self-reporting program). However, such experiences are rare, and fishermen are more likely to recall examples of fisheries becoming more restricted rather than more liberalized. These fishermen, many of whom are not heavily involved in fishery management, may not fully understand their role and responsibility to the fishery management process, including the importance of the data they submit, what they will be used for, and the particular need for their participation given the unique life-history of tilefish. Efforts to educate recreational anglers, such

as cooperative research programs,⁶ have been successful in the past to galvanize desired actions that lead to conservation of various species.

Why don't YOU report your tilefish landings and fishing effort?

We asked fishery leaders in 5 regions. Here is what they shared (speaking on behalf of themselves and friends/constituents):

- 1-800-CLOSE-ME mentality; sense that self-reporting will lead to fishery closures as catch limits are reached
- What good does it do? Lack of concrete examples of how self-reporting can help them
- Concern about sharing secret/specific fishing locations
- Self-reporting options are complicated, confusing, and ask for too much information
- MRIP data is concerning/flawed and the fact that fishery managers continue to use it reduces trust in the science
- Recreational fishing is supposed to be fun, not burdensome
- I forget
- I didn't know about the reporting requirement—or, I only fished for tilefish for a few hours on what was primarily a trip targeting pelagic species and so it didn't strike me to submit a report

Finding: Despite a year-over-year increase in the number of tilefish permit-holders, four years after implementation of the program, there are substantial concerns that a significant proportion of private recreational tilefish fishermen (i.e., eligible permit-holders) remain unaware of the permitting/reporting requirements. Notifying private recreational fishermen about new or ongoing reporting requirements demands strategic and ongoing direct and indirect communication methods. Limited and inconsistent communication has resulted in mistrust of fishery managers by recreational tilefish fishermen, which fuels non-compliant attitudes and could jeopardize the broader fishery management process.

RECOMMENDATION 1: *Prioritize outreach.* Ask the recreational tilefish fishing community for help. GARFO staff should increase awareness of the permitting and reporting program, including the eFin Logbook option for reporting. Multiple short and long-term outreach strategies are detailed in Appendix 1.

RECOMMENDATION 2: *Increase two-way communications.* GARFO and MAFMC staff should build and maintain trusting relationships and generally increase engagement by regularly communicating with these stakeholders.

⁶ For example, since its inception in 1962, participants in the NOAA Fisheries Cooperative Shark Tagging Program have tagged more than 295,000 sharks representing 52 species.

Strategies

- o Develop and implement short-term and long-term two-way communication plans that increase in-person and online interactions with recreational tilefish fishery participants. Reach out frequently in low-cost, high-impact ways (refer to Appendix 1 for specific recommendations);
- o Coordinate outreach messaging and use of recreational fishing-appropriate language across relevant entities;
- o Increase transparency and educate anglers about the long-term benefits of reporting along with details about the data that are submitted (e.g., season-end summaries coupled with an opportunity to renew permits for the following year);
- o Consider the value that communication/education can provide as incentives for increasing tilefish self-reporting recruitment and retention.
- o Explore additional fishery data collection approaches to address key data gaps with input from NEFSC scientists, as an additional form of angler engagement. Consider the collection and utilization of local ecological knowledge (LEK) from long-time fishery participants to qualitatively evaluate trends in effort/CPUE, and/or complement the current program with targeted citizen science efforts, as appropriate.

Theme II: Improving the Data Collection Component

Data reporting requirements: Final regulations stipulate multiple specific data fields that must be submitted by private recreational tilefish fishermen (listed in Appendix 2) and these fields are largely included verbatim in the reporting platforms available to anglers. Fishermen stated multiple barriers to compliance and emphasized their confusion due to the complexity and breadth of the tilefish reporting requirements. In an attempt to provide interoperability among incoming data streams, recreational trip report questions generally use language that appears to be carried over from commercial fisheries data collection infrastructure at GARFO. This terminology is confusing and foreign to recreational fishermen.

Many fishermen repeatedly stated that their reluctance to report was related to confusion with fields required by the program and the associated burden of doing so, especially for reporting effort. For example, the program requires permit-holders to separately report effort for each statistical area within a single trip, despite the recreational community's general lack of familiarity with the statistical areas used in fisheries data collection. Furthermore, there are required fields that lack granularity to link fishing effort information (e.g., location, hours fished) to a certain species of tilefish, despite the fact that blueline and golden tilefish are often targeted at different locations, substrates, and depths. As a result, it is unlikely that effort data would be usable in single-species stock assessments. Meanwhile, some requested data fields are difficult to answer because they are too granular (e.g., "number of hooks per line" or "depth" may vary over the course of a day or even a single drift). Finally, information is requested that is not pertinent to recreational tilefish fishing effort or techniques (e.g., indicating the time of trip departure/return is not relevant when many tilefish fishermen are fishing for HMS for most of the day).

Usage of the eFin Logbook app: While many of these challenges stem from the regulatory requirements of the program, they are in several instances exacerbated by the layout and

wording of the eFin Logbook app, contributing to the perception that reporting requirements are confusing and burdensome. eFin Logbook was intended to be more user-friendly and easier for recreational anglers to navigate compared to existing reporting platforms, and Council staff have generally suggested that program participants use eFin Logbook instead of other alternatives. However, participating anglers have reported a number of challenges with using the app. For example, the first question asked when submitting a trip report is “Select an effort,” which is a wholly unfamiliar term to private anglers.

Due to these challenges, effort data is not likely reported accurately, especially location, effort by species targeted (which is not requested by the program), and hours spent fishing. Fishermen highlighted a number of issues related to how effort data is expected to be reported. For example, nowhere is it specified that a separate “effort” (i.e., specifics regarding gear used, depth, catch, etc.) must be entered for each statistical area fished on a given trip.

Finding: Investments in enhanced recreational fishery-dependent data collection will result in improvements in stock assessments, more effective fisheries management and increased stakeholder trust in the system. Reporting requirements should reflect the operational nature of the fishery. To maximize data collection and ensure accuracy of submitted data, platforms should be generally easy to access, learn, and complete by private recreational fishermen, who often view their activities as a hobby. Asking for less information from anglers that is more likely to be accurate may provide higher-quality, more usable information that could be used in stock assessments and management.

RECOMMENDATION 3: *Explore the need for regulatory changes to simplify/eliminate the requirement to report fishing effort.* Ask for input early and often. GARFO and NEFSC staff should convene to evaluate whether regulatory changes should be made, including reducing requirements for effort data, in order to increase the quality of data collected. Note: This change would require MAFMC action.

Strategies:

- o Discuss administrative logistics of such a modification among GARFO staff;
- o Coordinate with stock assessment scientists to ensure that all collected data is essential;
- o Present proposed modification to MAFMC members and solicit feedback;
- o Review proposed changes and supporting information with private tilefish anglers prior to implementation.

RECOMMENDATION 4: *Alter the contents, language, and layout of the eFin Logbook app.* Publicize changes. MAFMC staff, with support from GARFO staff, should amend the app to improve the user experience, thereby supporting improved data quality and utility. (*Examples, along with potential options to mitigate confusion, are provided in Appendix 2.*)

Strategies:

- o Facilitate direct engagement between eFin Logbook developers (Harbor Light Software) and GARFO staff to ensure that changes conform to existing (or amended) regulatory requirements of the program.
- o Communicate widely any changes made and attribute them to fishermen input;

- o Engage fishermen in future beta-testing of software and review of non-regulatory outreach communications.

Theme III: Envisioning Enforcement as a Strategic Catalyst

Focus group participants generally agreed that while increasing angler awareness of the program was a first-order concern, it needs to be accompanied by an effective (and well-publicized) enforcement effort that demonstrates NOAA Fisheries' commitment to increasing compliance with program requirements. To date, fishery participants do not recognize that there is a risk associated with either not obtaining the permit and/or not reporting catch/effort.

To date, OLE has generally prioritized compliance assistance over issuing penalties in the private recreational tilefish fishery. However, a harder-line enforcement effort that includes penalties issued on par with those issued for recreational HMS permit violations may be a helpful "stick." This is especially appropriate given that the program is now four years old and was the subject of a concerted outreach effort in Winter 2023-2024 to raise awareness. Focus group attendees believed that if penalties began to be issued, that information would quickly ripple throughout the recreational tilefish community and potentially increase compliance.

Enforcement officers and partners may not have complete information about the program (e.g., we learned that OLE officers were unaware of the eFin Logbook app specifically designed for private-angler tilefish reporting) and may also not have a sense of which anglers are potential tilefish anglers when vessels are intercepted. Increased internal collaboration with GARFO, NOAA Fisheries recreational fishing specialists, and Council staff would likely boost the success of enforcement activities and result in increased compliance.

Finding: Lack of enforcement and/or enforcement penalties has likely contributed to continued apathy by tilefish anglers towards the permitting and reporting requirements.

RECOMMENDATION 5: *Develop and implement an enforcement strategy. Publicize the strategy and outcomes.* NOAA's Office of Law Enforcement and Joint Enforcement Agreement partners should identify a period of compliance assistance and then commence enforcing these requirements, consistent with recreational HMS penalties.

Strategies:

- o Initial focus should be on promoting awareness of the requirements (i.e., compliance assistance) and aligning outreach and messaging with those coming from the Council and GARFO;
- o Determine metrics/timeline by which general strategy will shift from one of compliance assistance to penalties for non-compliance;
- o Ensure (and publicize) that the summary settlement schedule for tilefish permitting/reporting violations is in alignment with those for other permit violations/reporting violations.

Theme IV: Collaborating to Maximize Efficiency and Effectiveness

GARFO and Council staff have separate roles and responsibilities with regard to tilefish permitting, data collection, and fisheries management. However, they are dependent on each other for the exchange of program and stakeholder information and for effective program administration and refinement, which requires collaboration and communication. They are also dependent on and must be sure to coordinate with enforcement entities, who are the at-sea points of contact for tilefish anglers and who require up-to-date information. In 2023, for example, OLE developed tilefish outreach materials independently of those developed by the Council, and OLE's materials included no mention of the eFin Logbook app (and used largely commercial/for-hire-oriented language such as "eVTRs"). This web of involved parties requires careful and sustained collaboration.

To increase efficiency, collaborative efforts could also include HMS fishery managers. While the purview of the HMS Division does not include tilefish management, the near-universal overlap between tilefish and HMS anglers presents an opportunity for HMS managers to help boost tilefish program awareness and participation. Furthermore, collaboration among fishery managers could reduce the perceived complexity of the system (e.g., tilefish fishermen who also target HMS currently have multiple points of contact and separate permitting systems for the same fishing trip). The siloed management system increases the opacity of the fishery management process to anglers; their expressed frustration in focus groups highlights the need for information exchange between HMS and tilefish self-reporting program personnel at both GARFO and the Council.

Currently, program effectiveness is compromised due to a lack of collaboration among the management entities. This is exacerbated by the lack of direct experience of relevant GARFO staff who administer the program with the recreational community in general and with recreational tilefish fishery participants in particular. The presence of recreational fishing specialists among Council and HMS staff—along with recreational community expertise on the Council itself—provides an opportunity for skills/contacts sharing.

Finally, *external* partnership opportunities exist to increase education, outreach, and data collection and to build strong relationships with willing fishery participants. Increased communication about and support for this program by a broad range of partners will expand its presence within this diffuse fishing population. Ultimately, a more active collaboration would increase trust among fishermen as they begin to see fishery managers as transparently working towards a common goal of long-term fishery conservation and angling opportunities. Considering recreational fishermen as partners of NOAA Fisheries' scientists and managers would aid GARFO in developing products and services that are customer-facing, resulting in fishermen who actively support NOAA Fisheries' mission.

Finding: Organizational fishery management silos prevent collaboration, leading to poor communication and frustration, and creating inefficiencies. Failure to share information, data platforms, communication channels, and outreach opportunities reduces efficiency. Small investments by key staff within the HMS Division could provide leverage for GARFO fishery managers and OLE agents, who may lack recreational HMS/tilefish fishery stakeholder expertise

and community connections. Failure to connect with the tilefish fishing community more broadly reduces opportunities for two-way communication, including information collection regarding the fishery and minor program adjustments that could lead to major improvements.

RECOMMENDATION 6: Increase communication and collaboration among relevant fishery managers and communications staff. GARFO fishery managers should secure efficiencies and increase overall effectiveness by leveraging recreational fishery management resources/skills, sharing information, and developing unified communications strategies, among other science and management entities.

Strategies:

- Establish a quarterly call among HMS, GARFO, OLE, and Council management and communications staff to discuss ongoing and emerging issues and follow up roles and responsibilities;
- GARFO staff should solicit support regarding fishery activities, participants, etc. from relevant NOAA Fisheries recreational fishing coordinators;
- Ensure that OLE staff have accurate/up-to-date information about the permitting and reporting requirement to share with anglers;
- Leverage HMS staff interactions with HMS permit-holders to streamline outreach efforts given the overlap between recreational HMS and tilefish fishery participants (See Appendix 1 for specific recommendations);
- Develop GARFO recreational fishery community and management expertise.

RECOMMENDATION 7: Invest in external partnerships. MAFMC and GARFO should develop and/or strengthen partnerships with tilefish fishery and business leaders, state fishery managers, dockside samplers, and port agents to increase visibility of the recreational tilefish program, build trust with participants, and achieve other common goals.

Strategies:

- Leverage existing relationships with tilefish community leaders (e.g., Council members, fishing club leaders, focus group participants) to expand program reach for dissemination of information/educational materials;
- Designate a single point of contact at GARFO/NOAA Fisheries for maintaining these relationships;
- Encourage and support partners such as fishing clubs to develop attention-getting motivational efforts to increase compliance (e.g., “swag” raffles for program participants).

Theme V: Strategic Program Development and Assessment

An ongoing learning cycle which includes development of goals/performance standards and subsequent systematic assessment of this program could boost effectiveness of the program and provide an opportunity for staff to learn from mistakes, identify potential improvements, and achieve program goals. Ongoing evaluation against a set of performance measures would improve effectiveness of this program and highlight future priorities.

Finding: Failure to establish a vision and goals for a data collection program and to track progress, even for a small sector, limits overall success which undermines performance and stakeholder confidence in the fishery management process. If opportunities to reflect on progress are implemented and resources are used strategically to consider costs and benefits of potential programmatic adjustments, the likelihood of success is greater.

RECOMMENDATION 8: *Develop clear programmatic goals and evaluate progress.* Ask for fishing community input; publicize findings. NEFSC and GARFO should establish a set of performance standards for desired levels of angler recruitment, retention, and data submission and possibly other aspects of the program, and annually evaluate the tilefish recreational data collection program to advance progress towards goals.

Strategies:

- o In the development of goals, include expertise from stock assessment scientists and fishery managers and provide meaningful opportunities for involvement by fishery participants;
- o GARFO should provide a written summary on tilefish program performance to the Council in advance of their annual presentation to the Council;
- o Expand annual GARFO presentation on the program to the Council to include an evaluation of successes and challenges in relation to program goals, along with a description of outreach efforts;
- o Develop an actionable response plan when the goals are not met;
- o Create and support opportunities for sharing evaluations (internally and externally) through management meetings, workshops, social networks, etc.

CONCLUSIONS

Outcomes matter. Requiring a permit and instituting mandatory reporting for fishermen assumes effective implementation and enforcement of a program and broad participation by fishermen in that sector. The assumption by fishermen that the program is fairly implemented establishes trust and a willingness to submit data. The ultimate outcome of incorporating angler-submitted data into stock assessments to support conservation and management of a species builds on that foundation. Regular evaluation of the data collected, communication of that data to the community, and subsequent applications to fishery management continues to strengthen the program's reputation, creating a positive feedback loop and potentially providing a model for other recreational self-reporting initiatives.

In its current form, the Recreational Tilefish Permitting and Reporting Program exhibits key inefficiencies and has provided little valuable data while also risking an erosion of trust by fishermen, whom scientists and managers depend on for information. *However*, there are key opportunities for the Council and relevant NOAA Fisheries offices to address outstanding challenges associated with this program. The recommendations outlined in this report are offered as suggestions to engage stakeholders and promote transparency of the fishery management process. By focusing on these recommendations, fishery managers can achieve favorable outcomes for golden and blueline tilefish data collection and management—and by extension for the recreational fishing community that targets these data-poor species.

APPENDIX 1. Recommended Outreach Opportunities

There is a need for cost-effective outreach to private recreational tilefish fishermen to raise awareness of the tilefish reporting program, build/restore trust between the recreational community and scientists/managers, and establish the momentum and continuity needed to ultimately increase permit-acquisition and self-reporting compliance. GARFO staff should lead these efforts with support from staff at the Council, HMS, OLE, and partners such as port samplers and state fishery managers, and ensure that outreach materials and messaging are clear, concise, and consistent. Information gleaned from improved outreach and communications should inform decisions about future program development.

Staff should follow general best practices for building stakeholder trust during all phases of the fishery management cycle, including: communicating effectively, listening to stakeholder frustrations, understanding their expectations, empathizing with their challenges, taking responsibility for program shortcomings, apologizing for program weaknesses, and involving and empowering stakeholders.

We recommend that the following specific outreach activities be conducted and/or continued:

1. **Continue providing reminder emails** to existing permit-holders of the need to renew the permit annually. Related: Ensure that anglers are able to apply for the permit for the upcoming season during the winter months. In late Winter of 2023, anglers who visited Fish Online were only able to apply for a 2023 permit, not a 2024 permit, which would be required beginning on May 1 (this was subsequently rectified by GARFO staff).
2. **Share permit/reporting data and landings/other catch summaries** to tilefish anglers at the end of each fishing season (~Jan-Feb). These summaries could be distributed directly to permit-holders or through any of the avenues described below.
3. **Increase visibility of fishery managers:** Tilefish management staff (Council and GARFO) should spend several days each year visiting venues with high tilefish angler density to increase their visibility among stakeholders, listen to fishermen's concerns, answer questions, disseminate written information about tilefish permitting and reporting requirements, and develop relationships to gain first-hand knowledge of participants and their perspectives. For venues targeting a more general angler demographic, outreach could also involve other Council-managed species, whereas for more offshore-focused venues, attendance in conjunction with HMS fishery managers would be even more effective. To increase angler interest, consider partnering with tilefish "high-liners" and linking tilefish "how-to" presentations/exhibits/articles with details of the permitting and reporting requirements.

Examples of potential venues include:

- a. Northeast and Mid-Atlantic tournaments targeting HMS
- b. Winter fishing shows/seminars with a high number of HMS/tilefish attendees, such as the Canyon Runner Offshore Seminar Series (Atlantic City, NJ),

Saltwater Fishing Expo NJ (Edison, NJ) and New England Saltwater Fishing Show (Providence, RI).

1. **Develop clear, concise, and up-to-date written materials** (e.g., the poster⁷ and rack card⁸ developed in Winter 2024) in private angler language (that is, “catch reports” instead of “eVTRs”) describing the permitting and reporting program/requirements (potentially on laminated/waterproof paper), and distribute those materials to:
 - a) NOAA Office Law Enforcement personnel;
 - b) NOAA Fisheries Port Agents;
 - c) Recreational tilefish community leaders,⁹ including tackle shops,¹⁰ charter captains, club presidents, and key fishing magazines/media entities;
 - d) HMS tournament operators and organizers; and
 - e) Marinas with a high density of HMS/tilefish anglers.
2. **Leverage social media** (in particular, Facebook and Instagram) as a cost-effective means to reach large numbers of tilefish anglers/potential tilefish anglers.¹¹ Develop short and eye-grabbing posts briefly describing the program and its value and linking back to the program’s landing page on the Council’s website. Encourage cross-posting (or original posting) with HMS, OLE, GARFO, state agencies, and recreational tilefish community leaders.
3. **Direct users to eFin Logbook** as the preferred platform for angler self-reporting. There are additional reporting options for private anglers who also have GARFO commercial or for-hire permits;¹² however, they are generally tailored to commercial and for-hire audiences and include language that may be foreign to private anglers. While eFin Logbook in its current form has challenges, it is still preferable to the alternatives (refer to Appendix 2 for suggested changes to eFin Logbook app). Having anglers use a simplified app that is specifically tailored to recreational tilefish anglers will avoid confusion, frustration and/or submission of incorrect information. The eFin Logbook app could also be used as an additional outreach source regarding the permit requirement—for example, linking to the Fish Online website on the login screen.
4. **Leverage HMS Division communications to the shared community** to streamline outreach efforts. Approaches could include:
 - a. Utilize HMS listserv for bi-annual tilefish reminders and disseminate tilefish program information at HMS Advisory Panel meetings and public hearings;

⁷ Available at: https://www.mafmc.org/s/Tilefish-Reporting-Poster_FINAL_for-online.pdf.

⁸ Available at: <https://www.mafmc.org/s/Tilefish-Rack-Card.pdf>.

⁹ Specific recommendations for tilefish community leaders were provided at focus groups and have been shared with Council staff.

¹⁰ In the Winter of 2024, as part of a separate outreach contract, W. Goldsmith distributed rack cards to 15 tackle shops between Massachusetts and Virginia that community leaders identified as key tilefish “hubs”; contact him at wgoldsmith@pelagicstrategies.com if that list is of interest.

¹¹ Specific recommendations for social media accounts were provided at focus groups and have been shared with Council staff.

¹² Additional reporting options can be found here:

<https://www.fisheries.noaa.gov/new-england-mid-atlantic/resources-fishing/electronic-vessel-trip-reporting-software-options>.

- b. Consider including information on/a link to the tilefish permitting and reporting program on the HMS Permit website, the Atlantic HMS Recreational Compliance Guide,¹³ and the HMS Catch Reporting App given the tilefish program's unique position as the only other required permit program for private anglers on the Atlantic coast;
- c. Align private angler tilefish permit timeline (currently on May-April cycle) with HMS permit timeline (January-December cycle) to further streamline outreach efforts; and
- d. Distribute tilefish outreach materials to Large Pelagics Survey samplers for distribution during dockside intercepts.

¹³ Available at:

<https://www.fisheries.noaa.gov/s3/2023-05/HMS-Recreational-Compliance-Guide-05-04-23.pdf>.

APPENDIX 2. Recommended Changes to the Tilefish Reporting App (eFin Logbook)

Based on final regulations implementing self-reporting requirements (85 FR 43149, July 16, 2020), recreational tilefish fishermen currently must report the following information:

- (A) Vessel name;
- (B) USCG documentation number (or state registration number, if undocumented);
- (C) Permit number;
- (D) Date/time sailed;
- (E) Date/time landed;
- (F) Trip type;
- (G) Number of anglers;
- (H) Species
- (I) Gear fished;
- (J) Quantity and size of gear;
- (K) Soak time;
- (L) Depth;
- (M) Chart area;
- (N) Latitude/longitude where fishing occurred;
- (O) Count of individual golden and blue line tilefish landed or discarded; and
- (P) Port and state landed.

Over the course of each of the tilefish angler focus groups, we received numerous comments regarding strategies to improve the eFin Logbook app, both in terms of its structure and its contents (some of which are fields required by the regulations). With the exception of a few charter boat captains who submit trip reports using eTrips or Fish Online, every focus group participant indicated that they would use the eFin Logbook app to report; this finding underscores the importance of making app improvements to reduce confusion and thus ensure participation and retention.

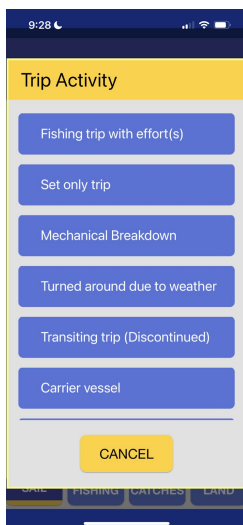
We recognize the challenges of attempting to collect data from an angling population that may largely be unfamiliar with self-reporting programs, which is exacerbated by the nuances of this highly specialized and niche fishery. However, given the potential for this program to be an example for future private angler self-reporting programs for other species, it is critical to “get it right.” Below, we have summarized the key recommended improvements to eFin Logbook emerging from the focus groups and interviews with other subject matter experts.. Some of these changes would require Council action to amend self-reporting regulations and would thus apply to the other self-reporting platforms available to program participants as well. These changes are noted below.

Broadly, managers and stock assessment scientists must recognize that there is a balance between a) the quantity and b) the quality of data that private anglers can be expected to submit. If private anglers are asked to provide detailed information on every aspect of their fishing trip, the likelihood of their submitting that information correctly decreases significantly, especially if the

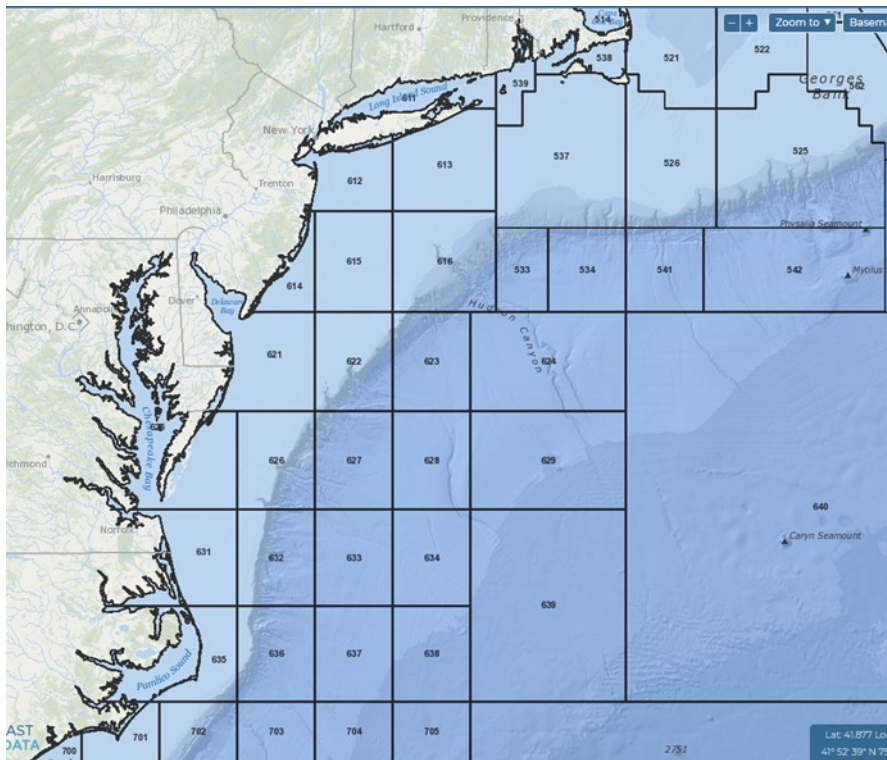
language and delivery of the questions is confusing to them. This is further complicated by the fact that this reporting program concerns multiple species (blueline and golden tilefish), which are often targeted at different depths/areas from one another but whose information (other than catch data) is combined in the trip report. Most private anglers likely will not submit information at the level of precision and granularity required of for-hire and commercial fishermen who submit vessel trip reports to GARFO. That being said, private anglers can and should provide valuable information for the purposes of tilefish stock assessment and management.

Recommendation 1: Improve clarity of app language to increase understanding and accessibility by recreational fishermen

Much of the language within the eFin Logbook app mirrors GARFO terminology used for electronic vessel trip reports (eVTRs) for the commercial and for-hire sectors. Every attempt should be made to make the language more familiar to anglers, which increases their likelihood of reporting accurately. For example, the first question at the beginning of each trip report is “What is your trip activity?” followed by a dropdown menu containing numerous unfamiliar terms, including “Fishing trip with effort(s)”:



In this case, the only feasible answer for private anglers is the first (for more on streamlining, see Recommendation 2). However, the term “fishing effort” (especially when used in plural) is likely foreign to many recreational fishermen, especially those not engaged in fisheries science/management. In this case, it refers to fishing in a certain statistical area. Instead of asking anglers to “Select an effort,” the app could ask anglers to select the area they fished on a map using the touchscreen function (according to statistical area). While it is possible that some anglers will fish in multiple statistical areas on a single trip, that information could be asked after entering catch information for the first statistical area.



NOAA Fisheries Statistical Areas (Source: Northeast Ocean Data Portal)

In addition, given the need to build (or rebuild) trust between anglers and managers, the app should educate anglers wherever feasible. For example, in the above question, there could be an information icon (ⓘ) which provides a pop-up message indicating how spatial data are used by tilefish scientists and managers.

On the “Fishing” tab, the following changes should be made to increase angler comprehension and ease of use:

- Changing “How long did you fish in this effort (hours and minutes)?” to “How long did you target tilefish in this area?” and changing “Tow Soak Time (Hours)” to “Time Fished for Tilefish.” For multiple day trips, tilefish anglers should be instructed to submit separate logbook entries for each day on which tilefish were targeted;
- For depth fished, asking for depth in feet instead of fathoms; and
- Providing drop-down menus or plus/minus signs (e.g., for number of hooks per line) instead of having anglers type in information whenever possible.

On the “Land” tab, consider changing “What port did you land in?” to something more general like state, county, or inlet, given that many private anglers may keep their boat at a private dock or trailer from a private boat ramp.

Some focus group participants supported having a “Notes” section at the end of the report where they could add trip (or app) comments either for themselves or for those reviewing the data.

Lastly, anglers were supportive of being emailed a trip submission confirmation that included a trip summary to ensure that they completed the trip report successfully.

Recommendation 2: Streamline reporting requirements

Throughout each focus group, anglers repeated the same refrain when it comes to the app: “Less is more.” With each additional click, screen, or question, the risk of losing potential reporters increases, reducing the likelihood of collecting meaningful, reliable data and contributing to a negative feedback loop in which those who *are* reporting are not seeing their data used, jeopardizing future participation.

Streamlining could entail changes to app design. For example, by removing the “Sail,” “Fishing,” “Catches,” and “Land” tabs at the bottom of each trip report and instead presenting the report as one continuous set of questions, users don’t have to navigate off the “Home” page. If multiple pages are needed, “Next” or “Back” buttons would be preferable, as would a progress bar.

Streamlining could also include reducing reporting requirements overall. In an attempt to improve data quality, Council and GARFO staff should discuss with stock assessment scientists the potential for significantly reducing what anglers are asked to submit in the app—in particular, effort information—in order to increase sustained angler participation. At a bare minimum, the app—and the program more broadly—could simply ask permit-holders to submit the number of golden and blueline tilefish harvested/discarded on each trip. (**Note:** This level of simplification would require Council action to remove other required fields currently included in the regulations). According to Paul Nitschke (NEFSC blueline tilefish and golden tilefish stock assessment lead), high-confidence recreational tilefish harvest data is the most critical need for this data-poor fishery. In the future, assuming angler buy-in and participation increases, effort components could be added.

If some effort components are to be maintained, we recommend the following changes to eFin Logbook:

For the current “Sail” tab:

- Remove the “What is your trip activity?” question, as anglers will only be submitting reports for trips on which they targeted tilefish; other options are irrelevant.
- Remove “How many anglers on this trip? (include captain/crew)” as not all individuals on the boat may be tilefish fishing. Instead add a question, “How many anglers fished for tilefish?”
- The multiple-efforts-on-a-single-trip issue will likely be confusing for anglers. Our understanding is that on most trips, anglers only fish for tilefish in one statistical area (this varies to some degree by port/area fished). While the option of selecting a statistical area, adding catch information for that area, and then selecting another statistical area (See Recommendation 1) is feasible, it may be too complex. An alternative would be for anglers to select from a map all areas in which they fished for tilefish on a given trip and provide combined catch information across areas. While not as high-resolution as catch by statistical area, it could be preferable to having no spatial information on catch.
- Remove “What time did you sail?”, as this question has no bearing on time spent fishing for tilefish (especially given that most trips targeting tilefish also target HMS).

For the current “Fishing” tab:

- Per the above comment, remove the “Effort Number” question as that information can be captured in another manner, if at all.
- Remove the “Where did you fish?” question. Captains/anglers are reluctant to share latitude/longitude information and spatial information can be captured by statistical area if so desired.
- Many focus group participants expressed some concern around the effort questions concerning number of hooks per line, depth fished, and amount of time fished. Anglers may target blueline and golden tilefish differently (different depths, number of hooks, time spent fishing) but those would have to be combined here, reducing their value for potentially calculating catch per unit effort. In addition, target species and depth can change even over the course of a single drift. While each of these categories is in itself not overly burdensome, these sources of confusion could result in unreliable/inconsistent data submission and should be vetted with anglers following app revision (See Recommendation 3).

For the current “Catches” tab:

- Per the above comment, remove the “Effort Number” question as that information can be captured in another manner, if at all.

For the current “Land” tab:

- Remove “What time did you land?”, as again, that information is not useful for assessing tilefish effort.

Recommendation 3: Engage anglers throughout the app revision and data collection process

The end users of eFin Logbook—the anglers themselves—should be an integral part of any app updates. Council and GARFO staff should consider reviewing the app with tilefish anglers (e.g., tilefish anglers on the Council and/or Tilefish Advisory Panel, or tilefish community leaders who attended focus groups as part of this program evaluation), affording them an opportunity to provide any feedback before a revised version is released. Anglers should continue to be engaged prior to any future updates/expansions of the platform.

It should be noted that several fields in the reporting app are specifically identified in the implementing regulations, including “Port and state landed,” “Date/time landed,” “Gear fished,” “Quantity and size of gear,” “Depth,” “Latitude/longitude where fishing occurred,” “Date/time sailed,” “Chart Area,” and “Soak Time.” Council action and subsequent amendment to the implementing regulations may be required.

In conclusion, a combination of basic language changes and a reduction in the number of fields required on the eFin Logbook app—and by the program overall—could significantly improve the end user experience, thus improving the quantity and quality of data submitted and raising the possibility that these data would be used in future stock assessments and/or for other management purposes.