Atlantic Reef Fish Hook Requirements

Federal Consistency
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Florida Fish and Wildlife Conservation Commission

Version 1

This presentation summarizes a proposed rule to adopt federal standards for hook requirements for reef fish in Atlantic state waters.

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Unless otherwise noted, images throughout the presentation are by FWC.

Background

- FWC and SAFMC promote tools to increase released fish survival
  - Includes circle hooks, non-stainless-steel hooks, and descending devices
- Discard mortality is one of the most significant management challenges for reef fish
- SAFMC modified gear requirements to reduce reef fish discard mortality
  - Stakeholder support for rules to help improve affected fish stocks

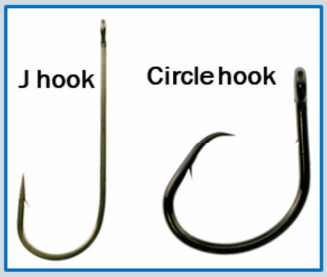


Illustration by FL Sea Grant

High discard mortality is a concern in the Atlantic reef fish fishery. Inevitably, fishermen will have to release a fish because it does not meet size, season, or bag limits, or because they are voluntarily practicing catch-and-release. Unfortunately, not all fish will survive release, and their survival may be diminished by several factors, including foul-hooking (hooking the fish in the stomach or throat), damage from poor handling, stress, or injury caused by barotrauma. When reef fish are pulled up from deep waters (commonly in depths greater than 60-80 ft), the change in pressure can cause the gas in the swim bladder to expand and sometimes burst, known as barotrauma. Symptoms of barotrauma include protruding stomach, bulging eyes, bloated belly, and distended intestines. The FWC and the South Atlantic Fishery Management Council (SAFMC) promote the use of best fishing practices and tools to help increase the survival of released fish. Some of these tools include circle hooks, non-stainless-steel hooks, and the use of descending devices.

SAFMC recognizes that mortality of released fish is one of the most significant management challenges facing reef fish. Discard mortality for some species, like red snapper, has exceeded the amount of harvested fish. To address this issue and reduce discard mortality of reef fish, SAFMC recently adopted new gear requirements for commercial and recreational fishermen fishing in Atlantic federal waters. Stakeholders generally supported these modifications because they can help improve affected fish stocks, like red snapper and grouper, for the long-term. Widespread, proper use of these tools can increase a fish's survival after release and will help fish populations remain sustainable for future generations.

SAFMC's Best Fishing Practices

Descending devices aboard vessels

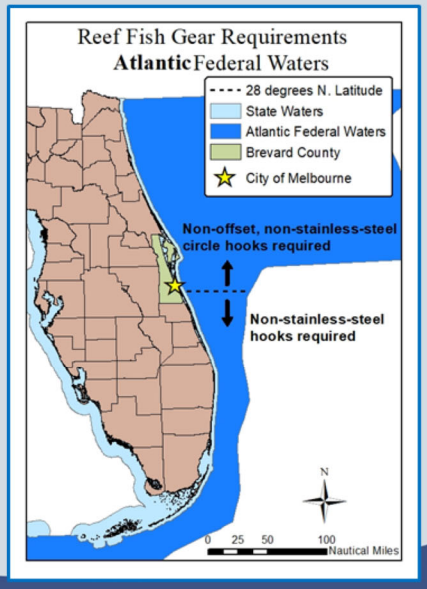
- Use increases survival by returning fish to depth

Non-stainless-steel hooks

- Degrade faster

Non-offset circle hooks north of 28° N. latitude

- Reduce hook-related mortality
- Allows for regionally-important fisheries to continue using "J hooks" south of 28° N. latitude



As of July 15, 2020, recreational and commercial fishermen targeting reef fish with hook-and-line in Atlantic federal waters are required to possess or use certain gear to promote survival of released fish species. Descending devices are required and must be readily available for use. When a fish exhibits symptoms of barotrauma, these devices help return a fish to depth where increased water pressure will recompress the swim bladder.

SAFMC also requires the use of non-stainless-steel hooks when fishing for reef fish species when using hook-and-line with natural baits in Atlantic federal waters. Non-stainless-steel hooks degrade faster in the marine environment compared to stainless steel or other non-corrodible metals, ultimately increasing a fish's chance for survival if the line is broken, or if the hook cannot be removed.

Additionally, only non-offset circle hooks are allowed for the harvest of reef fish in federal waters north of 28° north latitude, which is near Melbourne, Florida. This requirement is based on increased post-release survival rates for fish caught on non-offset compared to offset circle hooks. Allowing the use of other types of non-stainless-steel hooks south of 28° north latitude allows for regionally-important fisheries to continue. The yellowtail snapper fishery in south Florida operates in such a way that small circle hooks are swallowed by fish or snagged in the fish's gut, thus increasing discard mortality. Therefore, J hooks are the preferred hook for this fishery. Additionally, for-hire vessels in southern Florida will drift fish using J hooks. The current is strong in these areas, so fishermen typically use two to three J hooks in line to hold soft bait and keep it from spinning while drifting over the reef.

Current Required Gear for Reef Fish in State Waters

- Dehooking tool required

Atlantic state waters

- No specific hook requirements

Gulf state waters

- Non-stainless steel, non-offset circle hooks
- Exception: Non-stainless-steel "J hooks" allowed in commercial yellowtail snapper fishery south of 25°09' N. latitude

Ongoing extensive outreach and education to promote best fishing practices, including voluntary use of descending devices and venting tools

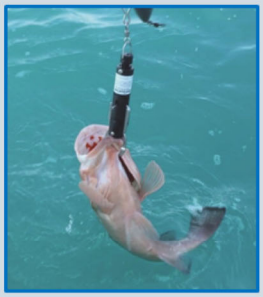
The possession and use of dehooking tools are required in both Florida Atlantic and Gulf state waters. Currently, there are no specific hook requirements for reef fish in Atlantic state waters. In Gulf state waters, those fishing for reef fish using hook-and-line with natural baits from a vessel are required to use non-stainless steel, non-offset circle hooks. The only exception is the allowance of non-stainless-steel J hooks in the commercial harvest of yellowtail snapper in the Gulf south of 25°09' north latitude (Cape Sable). Commercial harvest of yellowtail snapper operates most efficiently with J hooks as small circle hooks are often ingested, increasing post-release discard mortality. There are similar hook regulations for reef fish in Gulf federal waters.

Supplementary to regulatory requirements, FWC conducts ongoing extensive outreach and education to promote increased survival of released reef fish through best fishing practices. This includes encouraging the voluntary use of descending devices and venting tools when needed to treat barotrauma.

FWC's Best Fishing Practices Messaging

Goal: Encourage fishermen to improve survival rates by releasing fish as quickly as possible with minimal harm

- Proper fish handling techniques
- Minimizing handling time
- How to use tools that increase survival rates
  - Non-offset circle hooks, non-stainless-steel hooks, dehooking tools, descending devices, and venting tools



Right photo courtesy of Brian Hutch

FWC promotes and develops educational programs on best fishing practices and empowers fishermen to help conserve fisheries for the future. Strategic messaging encourages fishermen to improve survival rates of fish by releasing them as quickly as possible, and with minimal harm. Staff work to achieve this goal through education on proper handling techniques, minimizing handling time, and proper use of tools to increase survival rates.

Proper handling techniques helps to reduce damage and stress to the fish prior to release. This includes having all the necessary tools, handling fish only with wet hands, and holding fish horizontally, never by its jaws, gills, or eyes. Additionally, minimizing handling time and releasing fish as quickly as possible reduces stress on fish. Matching appropriate tackle to the targeted species helps to land fish more quickly and reduce stress. Using dehooking tools allows fishermen to quickly release their catch while minimizing injuries and handling time. Both venting tools and descending devices should only be used if a fish exhibits barotrauma. Improper use of these tools by inexperienced fishermen may increase handling time and cause even more stress and damage to the fish, reducing its overall success of post-release survival.

FWC Outreach Efforts

Public outreach events

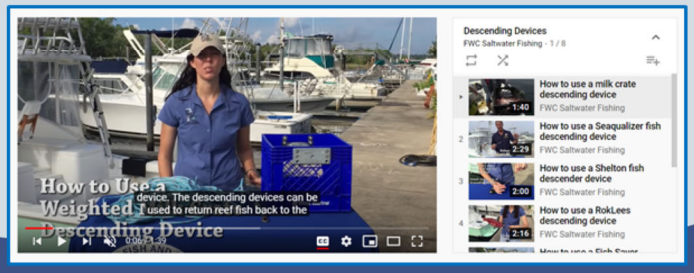
- In-person demonstrations

Online and print resources

- Videos, fish handling webpage, publications

Catch a Florida Memory

- Angler recognition program



FWC engages with the public through a number of interactive forums. In-person demonstrations at community events, fishing clinics, and formal presentations allow staff to provide a hands-on opportunity for fishermen to learn proper tools and techniques to use while fishing.

A plethora of online and print resources are available for fishermen to improve their skillset on the water. FWC's Saltwater Fishing YouTube Channel provides fishing "how-to" and other informational videos such as identifying when a fish has barotrauma, proper use of barotrauma mitigation tools (descending devices and venting tools), and even how to make your own descending device using materials from home. Fishermen can also access FWC's fish handling webpage and many other FWC publications that include messaging on best fishing practices and fish handling including, the Catch and Release brochure, Fishing Lines field guide, saltwater fishing regulations publications, Boating and Angling guide maps, monthly Fishing in the Know newsletter, press releases, and other items.

Catch a Florida Memory is FWC's saltwater angler recognition program that encourages anglers to target a variety of species, reducing fishing pressure on the most commonly sought-after catches. Participants in the program receive regular communications on handling techniques and best fishing practices, and are eligible to receive multiple conservation-oriented prizes such as dehooking tools and lip grips.

Encouraging Descending Device Use

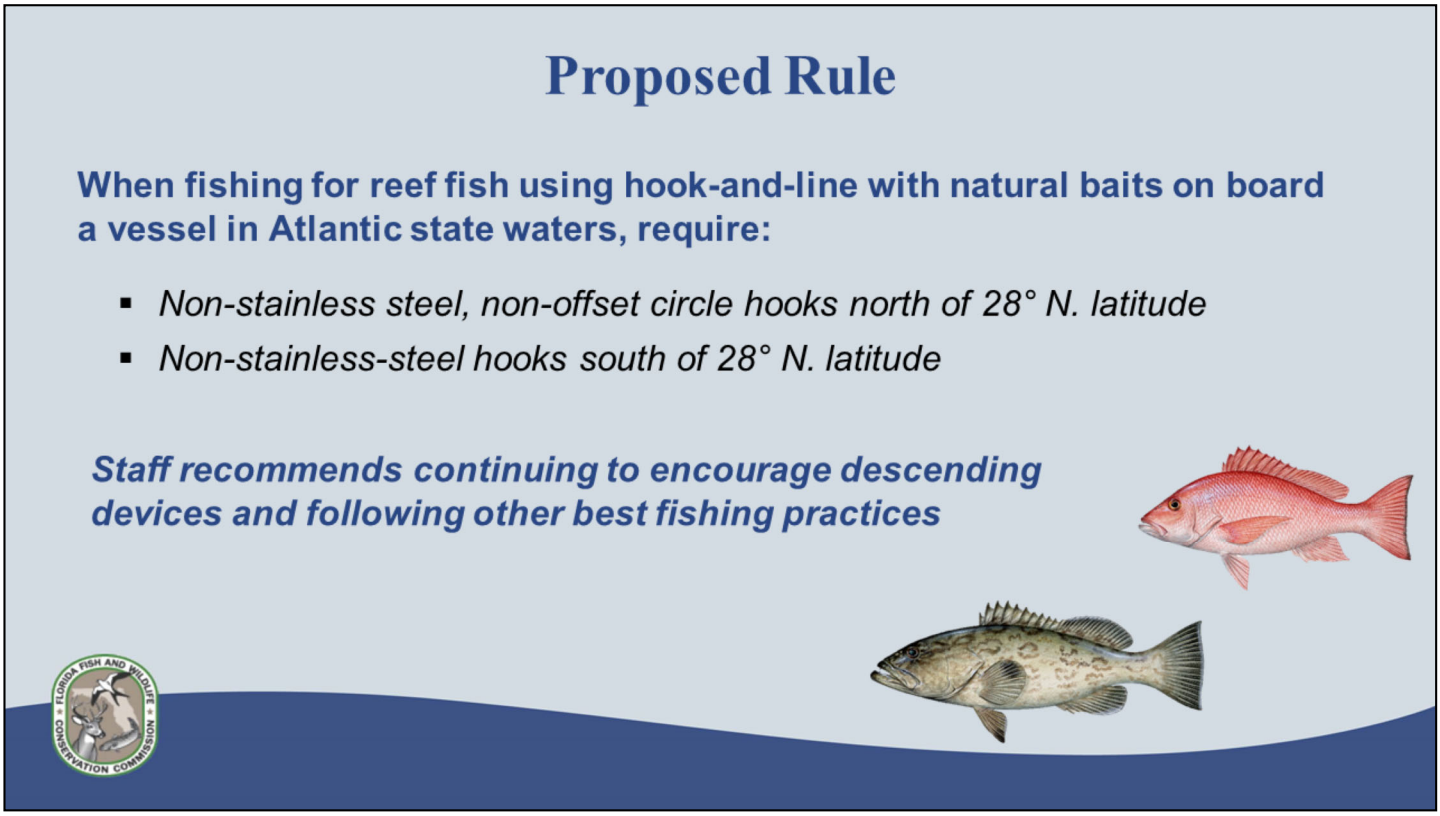
- FWC is a leader in best fishing practices messaging
  - Collaborate with state, federal, and NGO partners
- Identify and understand barriers to use
- 2017 Descending Device Citizen Science Study
  - Provided over 600 devices for fishermen to test
- Fine-tune existing outreach and education efforts
  - Focus on awareness and user confidence

Photo courtesy of NOAA Fisheries

FWC is a leader in best fishing practices messaging, and collaborates with other state, federal, and NGO partners to encourage fishermen to properly use descending devices. Over the years, there have been multiple studies, including the FishSmart South Atlantic Best Fishing Practices Education and Conservation Effort Project, to engage directly with anglers to improve the survival of caught-and-released fish that exhibit barotrauma. These studies also gathered direct feedback from anglers on their experiences using descending devices and helped identify barriers to using these devices. Descending device limitations include anglers being uncomfortable using them and some preferring venting tools over descending devices. Also, devices can be complicated and time-consuming to use, which could increase handling time for those who are inexperienced, and potentially reducing survival rates of released reef fish.

To identify fishermen's preferences and potential barriers to use, FWC conducted a Descending Device Citizen Science Study in 2017. In this study, over 600 descending devices were provided to anglers who did not already own a descending device. FWC also invited volunteers who already owned or were willing to purchase a descending device to participate. Surveys used in the study were designed to provide insight into fishermen's perceptions of barotrauma and descending devices, as well as gauge the likelihood that they would use a descending device in the future.

Results from this study allowed FWC to refine existing outreach and education efforts to help increase the use of descending devices. These efforts focus on increasing awareness of descending devices and how to use them. To continue to educate anglers about how to use these devices, FWC staff have developed additional promotional materials including YouTube videos, articles, newsletters, and emails geared toward anglers fishing for reef fish.



FWC's current outreach and education programs are working to encourage fishermen to use best fishing practices and implementing additional hook requirements in Atlantic state waters can help improve conservation of important reef fish. The proposed final rules would require anyone fishing for reef fish using hook-and-line with natural baits on board a vessel in Atlantic state waters to use non-stainless steel, non-offset circle hooks north of 28º north latitude and non-stainless-steel hooks south of 28º north latitude. These changes would be consistent with current regulations in adjacent federal waters.

Staff also recommends continuing to encourage the voluntary use of descending devices and other best fishing practices through our marine fisheries outreach and education program.

Considerations

- Proposed hook requirements can improve survival of released reef fish
  - May lead to improvements in stocks
- Consistent regulations reduce confusion
- Allows regionally-important fishing practices to continue
- Descending devices not always necessary in shallow waters
- Non-regulatory approach to descending devices for state waters allows fishermen to choose release tools appropriate for their situation

There are several points to consider in deciding whether to amend Atlantic state hook requirements for reef fish.

The proposed hook requirements for reef fish in state waters can help reduce discard mortality and improve the survival of released fish. Increasing survival rates may lead to improvements in stocks and can help ensure fish populations remain sustainable for future generations. Additionally, consistent hook requirements between Atlantic state and federal waters reduce regulatory confusion for fishermen. These regulations will be similar to current hook requirements for reef fish in Gulf state and federal waters, which will make regulations more uniform statewide.

Allowing continued use of non-stainless-steel J hooks south of 28° north latitude (near Melbourne, Florida), is important for regional fisheries, such as the commercial yellowtail snapper and for-hire reef fish drift fishery. This exception is similar to the J hook exemption for commercial yellowtail snapper in Gulf state and federal waters south of Cable Sable.

When a fish is exhibiting signs of barotrauma, descending devices and venting tools can help optimize survival by helping a fish return to depth. Depth is a very influential factor on release mortality and the utility of descending devices. Generally, barotrauma occurs in reef fish when they are rapidly brought to the surface from depths greater than 60 - 80 ft. Reef fish caught in shallow waters, such as most Atlantic state waters, may not require descending methods, compared to reef fish in deeper waters, like Atlantic federal waters. By not requiring descending devices in state waters, fishermen will have continued flexibility to treat fish suffering from barotrauma with the barotrauma mitigation tool that best fits their comfort level and circumstances on the water.

Staff will continue ongoing outreach and education efforts to educate fishermen on how and when to use descending devices properly.

Staff Recommendation

Adopt regulations to require anyone fishing for reef fish using hook-and-line with natural baits on board a vessel in Atlantic state waters to use:

- *Non-stainless steel, non-offset circle hooks north of 28° N. latitude*
- *Non-stainless-steel hooks south of 28° N. latitude*

If approved by the Commission, the rule will be noticed and filed without further hearing as allowed under the adopting federal standards provision of section 120.54(6), Florida Statutes

Effective January 1, 2021

Illustration by FL Sea Grant

Staff recommends the Commission modify Atlantic hook regulations for reef fish in state waters to be consistent with recently implemented Atlantic federal requirements. The proposed rule would require anyone fishing for reef fish using hook-and-line with natural baits on board a vessel in Atlantic state waters to use non-stainless-steel, non-offset circle hooks north of 28° north latitude and to use non-stainless-steel hooks south of 28° north latitude.

If approved by the Commission, the rule amendment will be noticed and filed without further hearing as allowed under the adopting federal standards provision of section 120.54(6), Florida Statutes. Staff recommends the proposed rule to be effective Jan. 1, 2021.

Staff have evaluated the proposed rule under the standards of 68-1.004, FAC, and found it to be in compliance.