

Shortfin Mako



Draft Rule – Consent Agenda Item 4
July 17, 2019



Florida Fish and Wildlife Conservation Commission

Version 1

This presentation provides a summary of proposed draft rules to amend the Florida Fish and Wildlife Conservation Commission's (FWC) Shark and Ray rule [68B-44, Florida Administrative Code (FAC)] as it relates to recreational and commercial shortfin mako harvest in Florida state waters.

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Cover photo courtesy of NOAA Fisheries.

Shortfin Mako

- Pelagic, highly migratory species
- Managed domestically and internationally
 - NOAA Fisheries' Atlantic Highly Migratory Species Division (HMS)
 - Atlantic State Marine Fisheries Commission (ASMFC)
 - International Commission for the Conservation of Atlantic Tunas (ICCAT)
- 2017 stock assessment: overfished and undergoing overfishing
 - U.S. agreed to international effort to reduce harvest and prevent further population declines



Shortfin mako are large pelagic sharks that have a wide geographic distribution throughout the Atlantic Ocean and Gulf of Mexico, and cross domestic and international boundaries. They are popular in both the recreational and commercial shark fisheries, and are often caught as bycatch in commercial fisheries that target tuna and other highly migratory species. Because shortfin mako are highly migratory, their management requires both domestic and international cooperation. In the United States, the NOAA Fisheries' Atlantic Highly Migratory Species Division (HMS) manages shortfin mako in federal waters and the Atlantic States Marine Fisheries Commission (ASMFC) coordinates state management of shortfin mako in state waters from Massachusetts through Florida. ASMFC is an interstate commission of all Atlantic states that coordinates management of nearshore fish species.

Shortfin mako are also managed internationally by the International Commission for the Conservation of Atlantic Tunas (ICCAT). ICCAT is an intergovernmental organization comprising over 50 member nations, including the U.S., that manages Atlantic tunas, swordfish, billfish, and several species of sharks that are susceptible to being caught as bycatch in commercial tuna operations across the Atlantic Ocean, Mediterranean Sea, Caribbean Sea, and Gulf of Mexico. ICCAT conducts stock assessments, sets quotas, and recommends management measures to help rebuild overfished stocks and allow sustainable fishing.

In 2017, ICCAT conducted a stock assessment that indicated the North Atlantic shortfin mako population is overfished and undergoing overfishing. To prevent further declines in the population, ICCAT determined all member nations need to reduce shortfin mako landings by approximately 72-79%. Under the Atlantic Tunas Convention Act of 1975, if ICCAT adopts recommendations, the U.S. Secretary of Commerce, through NOAA Fisheries' HMS, must implement consistent regulations.

Recent U.S. Management Changes

- HMS modified regulations in federal waters
 - Commercial: require release of all live shortfin mako
 - Some allowance for retaining dead sharks
 - Recreational: minimum size limit increase
 - Males: 71 inches fork length
 - Females: 83 inches fork length
- ASMFC requiring states to adopt equivalent conservation measure by Jan. 1, 2020



Photo courtesy of NOAA Fisheries

In response to the ICCAT recommendations, HMS implemented measures in federal waters to prevent overfishing and help achieve long-term sustainability of the stock, while allowing commercial and recreational fishermen to retain shortfin mako under limited circumstances. HMS determined that these measures will help address overfishing and begin the process of rebuilding the stock as required by law.

For the commercial fishery, HMS mandated that all live shortfin mako must be released. Commercial fishermen may only keep a shortfin mako if it is caught using gillnet, bottom longline, or pelagic longline gear on properly-permitted vessels and the shark is brought to the boat dead. While pelagic longline is the primary commercial gear used to harvest shortfin mako, gillnet and bottom longline gear interact with the species. Allowing these gear types to retain dead shortfin mako helps reduce dead discards while limiting directed harvest.

For the recreational fishery, HMS increased and established different minimum size limits for male and female shortfin mako. Most sharks have a minimum size limit of 54 inches fork length (FL). However, new federal regulations require recreational fishermen to release male shortfin mako less than 71 inches FL and all females less than 83 inches FL. These minimum size limits are based on shortfin mako's size at maturity. The intent of these differing size limits is to allow recreational fishermen the opportunity to harvest smaller male sharks and help reduce harvest of larger female sharks.

While the above regulations apply to fishermen in federal waters, states cooperatively manage shortfin mako in their state waters. Cooperative state management is facilitated through ASMFC and the Coastal Shark Fishery Management Plan, which is designed to complement shark management in federal waters. The ASMFC adopts requirements in Fishery Management Plans and states are required to implement consistent regulations. At their recent meeting in May, ASMFC adopted a requirement for states, including Florida, to increase minimum size limits for mako sharks to match the federal size limit, or to implement an equivalent conservation measure, by Jan. 1, 2020.

Current State Shortfin Mako Regulations

	Recreational	Commercial
Permit requirements	<ul style="list-style-type: none"> ▪ Saltwater fishing license ▪ Shore-based fishing permit (if fishing from shore) 	<ul style="list-style-type: none"> ▪ Saltwater Products license ▪ Federal limited-access permit
Minimum size limit	<ul style="list-style-type: none"> ▪ 54 inches fork length 	<ul style="list-style-type: none"> ▪ Harvest prohibited
Bag limit	<ul style="list-style-type: none"> ▪ 1 per person, 2 per vessel 	
Gear	<ul style="list-style-type: none"> ▪ Hook and line only ▪ Non-offset, non-stainless steel circle hooks 	



For recreational anglers targeting sharks in Florida state waters, a recreational fishing license is required, and if fishing from shore, a shore-based shark fishing permit is also required. Recreational anglers may currently harvest one shortfin mako per person (two maximum per vessel) with a minimum size limit of 54 inches fork length. Shortfin mako may only be harvested via hook-and-line, and the use of non-offset, non-stainless steel circle hooks are required when using live or dead natural bait. If a recreational angler has a federal shark endorsement, they must follow federal regulations for sharks in state waters, unless the state regulations are more restrictive, in which case the state regulations would apply.

To harvest sharks commercially in state waters, fishermen must have a Saltwater Products License (SPL) and a federal shark limited-access permit (directed or incidental). Commercial fishermen must comply with all applicable federal regulations regardless of where fishing occurs, including state waters. However, when fishing in state waters with more restrictive regulations, the more restrictive state regulations must be followed. Under federal regulations, commercial harvest of shortfin mako is only allowed when the shark is brought to the boat dead in the longline or gillnet fishery. Because those gear are prohibited in state waters, and because all commercial vessels must have the federal limited-access permit, no commercial harvest of shortfin mako is allowed in Florida state waters.

Proposed Draft Rules and Considerations

- Increase recreational minimum size limit from 54 to 83 inches fork length
 - One size limit for both males and females
- Clarify that commercial harvest of shortfin mako is prohibited in state waters

Considerations

- Simplified approach
- Proposal meets requirements of ASMFC
- Single size limit speeds release and promotes angler safety
- Federal regulations already apply to commercial harvesters in state waters



To meet ASMFC's requirement, FWC must implement similar conservation measures for recreational shortfin mako in Florida state waters. The proposed draft rule would increase the recreational minimum size limit for shortfin mako from 54 inches to 83 inches fork length, maintaining a single limit for both males and females. The proposed draft rule would also clarify that commercial harvest of shortfin mako is prohibited in state waters.

The proposed draft rules are based on several factors. The current federal regulations have separate size limits for male and female shortfin mako, because they reach maturity at different sizes. However, maintaining a single size limit in state waters promotes conservation of shortfin mako while keeping regulations as simple as possible. Also, with the proposed size limit increase, FWC will meet the conservation equivalency measure required by ASMFC's recent change to the Shark Fishery Management Plan. The ability to use conservation equivalency measures allows states flexibility to develop alternative regulations for their state while still achieving the same conservation goal. Additionally, a single size limit may also speed the release of undersized shortfin mako to help ensure their survival. It will also promote angler safety when handling these large sharks, as anglers would not have to spend additional time and energy to determine if the shark is male or female.

Because commercial harvesters targeting sharks in state waters must hold a valid federal limited-access permit, they must follow federal regulations where they are fishing, unless state regulations are more restrictive. Additionally, the only allowable commercial gear to harvest shortfin mako in federal waters is gillnet, bottom longline, and pelagic longline, and these gear types are already prohibited in Florida state waters. Therefore, commercial harvest of shortfin mako is already not allowed in Florida state waters. However, the transit of shortfin mako legally harvested in federal waters by commercial harvesters is allowed, so these sharks can be sold to a properly licensed wholesale dealer.

Staff Recommendation

Approve the proposed draft rules for shortfin mako

- Increase the recreational minimum size limit to 83 inches fork length
- Clarify commercial harvest is prohibited in state waters

If approved and directed, the changes will be filed for adoption without further hearing



Effective on Jan. 1, 2020

Photo courtesy of NOAA Fisheries

Staff recommends approving the proposed draft rule amendments that would increase the shortfin mako recreational minimum size limit to 83 inches fork length and clarify commercial harvest of shortfin mako is prohibited in state waters.

Staff recommends the rules be effective on Jan. 1, 2020.

If approved, staff recommends the proposed changes be advertised and filed for adoption with no further hearing, unless requested by a member of the public.

Staff has evaluated the proposed draft rules under standards of 68-1.004, FAC, and found them to be in compliance.

The following slides are considered backup material
and are not anticipated to be part of the actual
presentation



Life History

- Highly migratory
- Primarily live in pelagic waters
- Slow growing and late to mature
 - Females attain larger size than males
 - Males mature by 8 years old, females by 19 years old
- Reach up to 13 feet and can live over 30 years



Photo courtesy of NOAA Fisheries

Shortfin mako are highly migratory and can travel across entire oceans. They primarily live in pelagic waters and are found throughout the Atlantic and adjacent seas, including the Gulf of Mexico, the Mediterranean Sea, and the Caribbean Sea. Tagging studies suggest they exhibit large-scale migratory patterns, but numerous aspects about their distribution and biology are still poorly understood or completely unknown. Shortfin mako are slow growing and do not reach maturity until around 8 years old for males and approximately 19 years old for females. Also, female shortfin mako attain larger sizes than males. Shortfin mako have been documented to reach up to 13 feet in length and can live more than 30 years.

Coordination Among States – Interstate Commissions



- Interstate commissions established by Congress
- Coordinate management of near-shore species that move among states
- Each commission has 3 members per state:
 - Agency representative (FWC staff member)
 - Legislative representative
 - Governor appointee

Atlantic States Marine Fisheries Commission

- Develops regulatory measures via Fishery Management Plans
- States required to comply or the U.S. Secretary of Commerce can close the state fishery

Gulf States Marine Fisheries Commission

- Non-regulatory compact
- Promotion and conservation of state-waters fisheries



Management Bodies

International Convention for the Conservation of Atlantic Tunas (ICCAT)

- Intergovernmental organization responsible for management and conservation of tunas, swordfish, billfish, and several species of sharks in the Atlantic Ocean and adjacent seas
- Over 50 member nations, including the U.S.

NOAA Fisheries' Atlantic Highly Migratory Species Division (HMS)

- Manages tunas, sharks, swordfish, and billfish in the Atlantic, Gulf of Mexico, and Caribbean federal waters

Atlantic States Marine Fisheries Commission (ASMFC)

- Deliberative body of Atlantic coast states that coordinates conservation and management of nearshore migratory species in state waters
- Each state has three representatives



There are several management bodies involved with shortfin mako shark management domestically and internationally.

The International Convention for the Conservation of Atlantic Tunas (ICCAT) is an intergovernmental organization responsible for the management and conservation of Atlantic tunas, swordfish, and billfish in the Atlantic Ocean and adjacent seas. There are over 50 member nations, including the United States. The scientific body of ICCAT conducts stock assessments on tunas and highly migratory species, as well as species that are often encountered as bycatch in these commercial fisheries, such as shortfin mako. Based on the results, ICCAT provides management recommendations to ensure sustainability of its fisheries.

NOAA Fisheries, through their Atlantic Highly Migratory Species Division (HMS), manages tunas, sharks, swordfish, and billfish in U.S. federal waters. These species are highly migratory and can travel long distances, often crossing both domestic and international boundaries. HMS develops and implements fishery management plans with input from their advisory panel, monitors commercial and recreational quotas, issues permits, and implements the domestic requirements of ICCAT.

The Atlantic States Marine Fisheries Commission (ASMFC) coordinates the conservation and management of migratory, nearshore species along the Atlantic coast. Each Atlantic state is represented by three Commissioners. The Commission focuses on interstate fisheries management, fisheries science, habitat conservation, and law enforcement. As members of ASFMC, all Atlantic coast states that are included in a fishery management plan must implement required conservation provisions of the plan or the U.S. Secretary of Commerce may impose a moratorium for fishing in the noncompliant state's waters.

Federal Shortfin Mako Regulations

	Recreational	Commercial
Permit requirements	<ul style="list-style-type: none"> ▪ <i>Private:</i> HMS Angling Permit and a shark endorsement ▪ <i>For-hire:</i> HMS Charter/Headboat permit and a shark endorsement 	<ul style="list-style-type: none"> ▪ Federal shark limited access permit (directed or incidental)
Minimum size limit	<ul style="list-style-type: none"> ▪ Males: 71 inches fork length ▪ Females: 83 inches fork length 	<ul style="list-style-type: none"> ▪ None
Bag limit	<ul style="list-style-type: none"> ▪ 1 per vessel 	<ul style="list-style-type: none"> ▪ Release of all live shortfin mako ▪ Only gillnet and bottom and pelagic longline may retain sharks if dead on haulback
Gear	<ul style="list-style-type: none"> ▪ Handline and rod and reel ▪ Non-offset, non-stainless steel circle hook 	<ul style="list-style-type: none"> ▪ Bottom and pelagic longline, rod and reel, handline, bandit gear, and gillnet



In federal waters, all recreational anglers must hold either the HMS angling permit or HMS Charter/Headboat permit, along with a shark endorsement. Anglers are limited to one shortfin mako per vessel with a minimum size limit of 71 inches fork length for males and 83 inches fork length for females. The only allowable gear is handline and rod and reel, and the use of non-offset, non-stainless steel circle hooks is required, except when fishing with flies or artificial lures.

To harvest sharks commercially, a federal shark limited-access permit (directed or incidental) is required regardless of where fishing occurs. All commercial fishermen must release all live shortfin mako. Commercial fishermen may only keep a shortfin mako if it is caught using gillnet, bottom longline, or pelagic longline gear on properly-permitted vessels, and the shark is dead on haulback. The owner of a vessel with an HMS vessel permit must comply with all applicable federal regulations regardless of where fishing occurs, including state waters, unless state regulations are more restrictive.

Federal Shortfin Mako Emergency and Final Rule

	Emergency Rule (short-term)	Final Rule (long-term)
Effective date	<ul style="list-style-type: none"> ▪ March 2, 2018 	<ul style="list-style-type: none"> ▪ March 3, 2019
Recreational	Size limit: <ul style="list-style-type: none"> ▪ 83 inches fork length 	Size limit: <ul style="list-style-type: none"> ▪ Males: 71 inches fork length ▪ Females: 83 inches fork length Gear: <ul style="list-style-type: none"> ▪ Circle hook requirement
Commercial	<ul style="list-style-type: none"> ▪ Release all live shortfin mako ▪ Only <i>pelagic longline</i> may retain sharks if dead on haulback 	<ul style="list-style-type: none"> ▪ Release of all live shortfin mako ▪ Only <i>gillnet</i> and <i>bottom</i> and <i>pelagic longline</i> may retain sharks if dead on haulback



Following ICCAT’s recommendation to reduce shortfin mako harvest, in March 2018, NOAA Fisheries implemented an emergency rule regarding recreational and commercial shortfin mako harvest until a final rule could be implemented. The emergency measures largely focused on maximizing the live release of Atlantic shortfin mako sharks, allowing retention only in certain limited circumstances, and increasing minimum size limits. Recreational fishermen (fishermen with HMS Angling or Charter/Headboat permits, and fishermen with Atlantic Tunas General category and Swordfish General Commercial permits when participating in a registered HMS tournament) were required to release any shortfin mako sharks smaller than the minimum size of 83 inches fork length (FL). All commercial fishermen (fishermen with a directed or incidental shark limited-access permit) were required to release shortfin mako that were alive. Only commercial pelagic longline vessels were allowed to retain shortfin mako if dead on haulback. All other gears had to release shortfin mako whether they were dead or alive. These short-term regulations were the proposed rules for Amendment 11.

Because of public input and additional analyses, NOAA Fisheries made three changes to the proposed rule before final implementation in March 2019. NOAA Fisheries adopted a different recreational size limit for males (71 inches fork length) and females (83 inches fork length). Also, all recreational anglers must use non-offset, corrodible circle hooks when fishing for sharks, except when fishing with flies or artificial lures. The final change allows commercial gillnet and bottom longline operations to also retain shortfin mako sharks if dead on haulback. NOAA Fisheries determined that the allowance of dead sharks by commercial gillnet and bottom longline gears is unlikely to impact the overall mortality of shortfin mako, because these gear types rarely encounter this species.

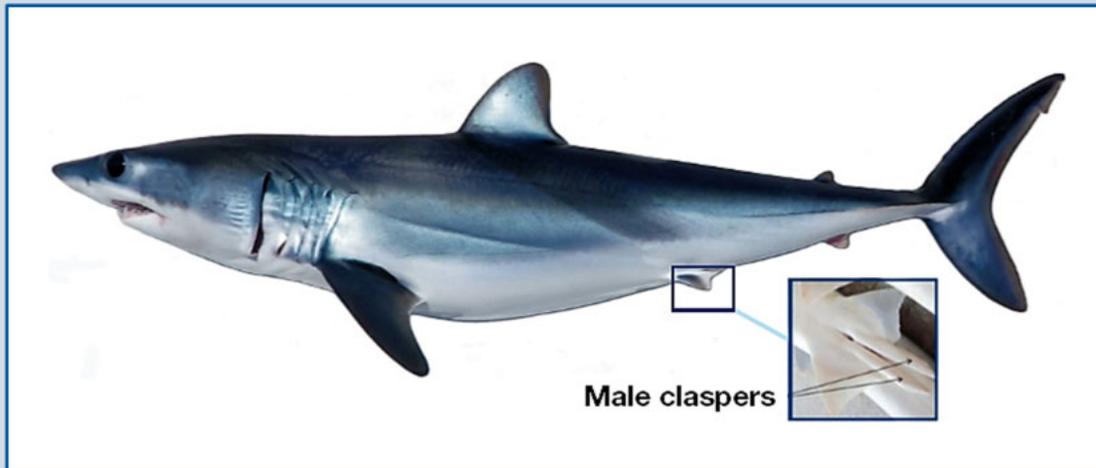


Image courtesy of NOAA Fisheries

Federal recreational regulations require a separate size limit for male (71 inches fork length) and female (83 inches fork length) shortfin mako sharks. To identify, male sharks have "claspers," as illustrated above, and female sharks do not have claspers.

Global Shortfin Mako Distribution

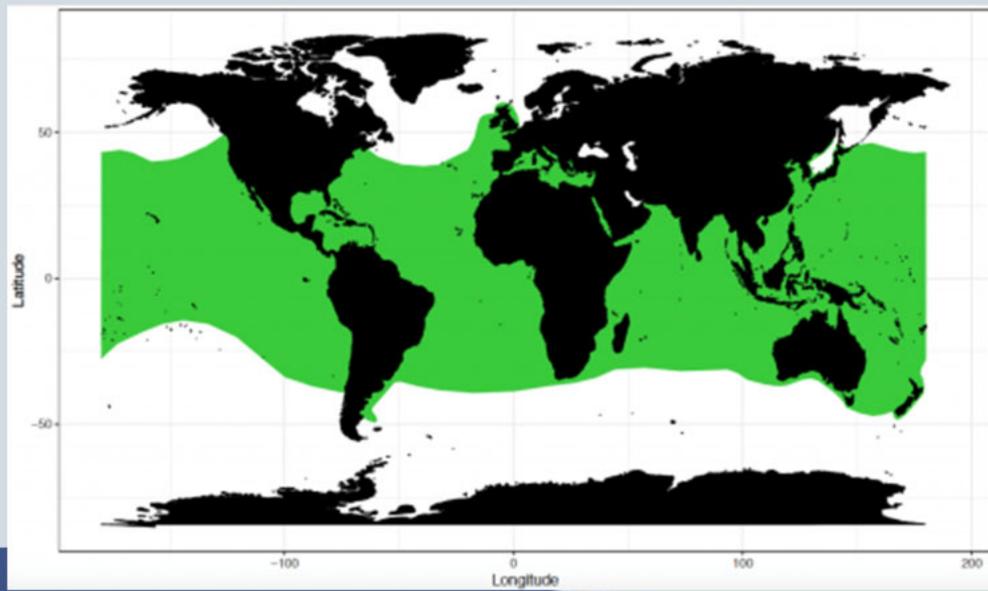
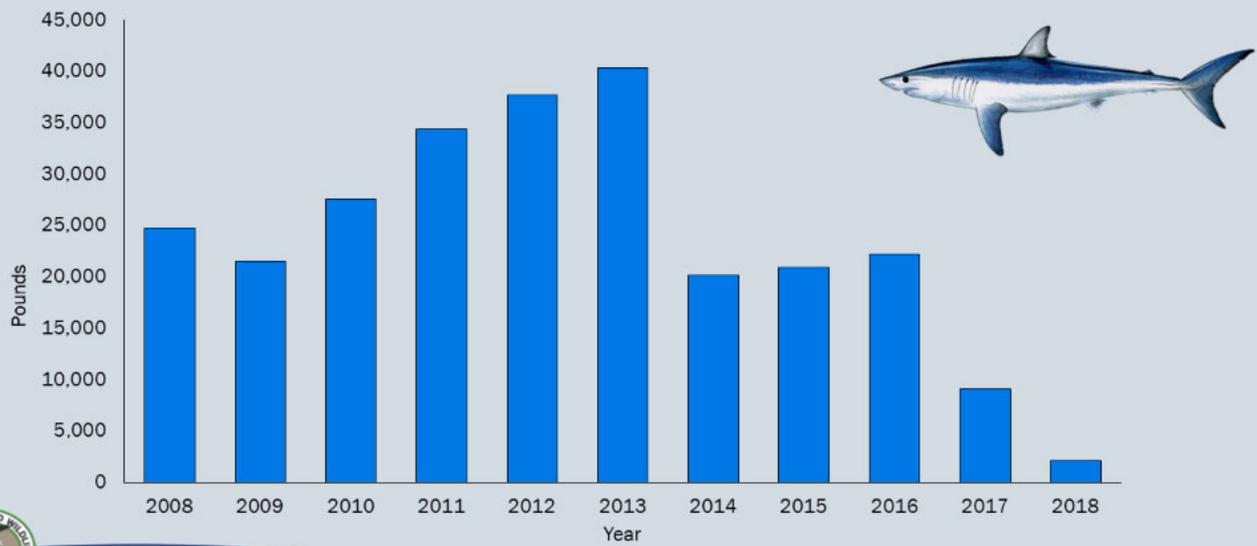


Image courtesy of Florida Natural Museum of History

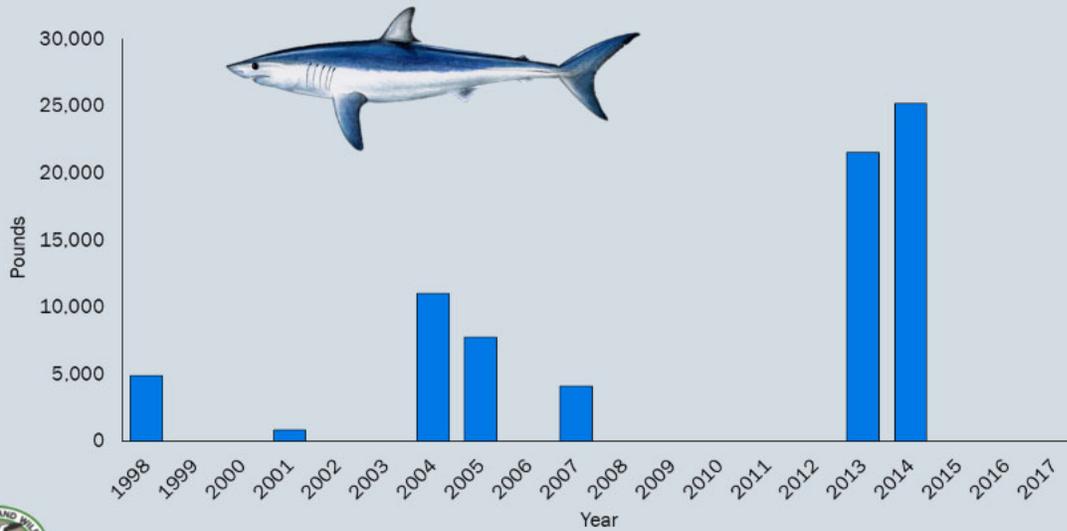
This image illustrates shortfin mako distribution worldwide.

Florida Commercial Shortfin Mako Landings



This graph illustrates state and federal commercial shortfin mako landings for all of Florida from 2008-2018.

Florida Recreational Shortfin Mako Landings



This graph illustrates state and federal recreational shortfin mako landings for all of Florida from 1998-2017. Over the past 20 years, there have been very few recreational landings of shortfin mako in Florida.

Source: Marine Recreational Information Program Query Database

FWC Shark Regulations

- Harvest prohibited for 26 shark species
 - Species particularly vulnerable to coastal fishing pressure
 - Contribute to population-level recoveries

Commercial and recreational harvest regulations

- Bag/vessel limits: 1 shark/person with a maximum of 2 sharks/vessel
- Minimum size limit: 54 inches for several species
- Allowable gear: hook and line only
 - Non-offset, non-stainless steel circle hooks required when using live or dead bait
- Shore-based shark fishing permit required if targeting sharks from shore or if using certain gear
- Sharks must be landed with head, tail, and fins attached



Federal limited-access permit required for commercial harvest

FWC prohibits harvest of 26 shark species when fishing in state waters. This prohibition includes not only species for which there are population concerns, but also provides for additional conservation of species that are particularly vulnerable to coastal fishing pressure. These additional protections contribute to population level recoveries.

In general, FWC manages commercial and recreational shark harvesters with the same regulations. Harvesters are allowed one shark per person per day with a maximum of two sharks per vessel. Several shark species for which harvest is allowed are subject to a minimum size limit of 54-inches fork length. Sharks without a minimum size limit include several small coastal species that do not generally reach 54 inches in length. The only allowable gear is hook-and-line and all fishermen targeting or harvesting sharks are required to use non-offset, non-stainless steel circle hooks when using live or dead bait. Any fishermen targeting or harvesting sharks from shore, including structures attached to shore (piers, bridges, jetties, etc.) must have the no-cost, shore-based shark fishing permit. All sharks must be landed with the head, tail, and fins attached.

Commercial shark harvesters in Florida state waters are required to have an annual federal limited-access vessel permit, in addition to the state's commercial fishing license (the Saltwater Products License). Commercial harvesters may only sell sharks to wholesale dealers who have a valid federal Atlantic shark dealer permit.

Prohibited Sharks and Similar Species

Large Coastal Species

Galapagos shark	Night shark
White shark	Lemon shark*
Sand tiger shark	Sandbar shark
Narrowtooth shark	Silky shark
Bigeye sand tiger	Great hammerhead*
Bignose shark	Scalloped hammerhead*
Caribbean reef shark	Smooth hammerhead*
Dusky shark	Tiger shark*

Small Coastal Species

Atlantic angel shark
Smalltail shark
Caribbean sharpnose shark

Pelagic Species

Bigeye sixgill shark
Bigeye thresher shark
Longfin mako shark
Sevengill shark
Sixgill shark

Zooplanktivores

Basking shark
Whale shark

Others

Spiny dogfish*
Manta and devil rays
Spotted eagle ray*
Smalltooth sawfish
Largetooth sawfish



* Species are prohibited from harvest in state waters but not federal waters

Photo courtesy of NOAA

This slide includes a list of shark and shark-related species that are prohibited from harvest when fishing in state waters. Species in blue (also indicated by an asterisk) are those for which harvest is prohibited from Florida waters but not prohibited in adjacent federal waters.

As previously stated, these prohibitions on harvest reflect either the vulnerability of these species to fishing pressure or, in some cases, concerns about their population status. Very few species on this list are included in the Endangered Species Act (ESA); the giant manta ray is listed as Threatened and both sawfish species are listed as Endangered.