This presentation provides a summary of a series of proposed draft rules intended to address management of the shore-based shark fishery and shark-related cleanup of existing Florida Fish and Wildlife Conservation Commission’s (FWC) shark regulations. The presentation includes public feedback received to date on the proposed changes to management of the shore-based shark fishery. The proposed draft rules presented would amend the FWC’s Sharks and Rays [68B-44, Florida Administrative Code (FAC)] and General (68B-2, FAC) chapters as they relate to saltwater fishing.

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

- Sharks play vital role in marine ecosystems
- Long-lived, slow to mature, few offspring
  - Highly vulnerable to fishing pressure
- Rapid stock declines in 1970s through early 1990s
  - Seen as an underutilized resource
  - Increased demand
  - Large coastal sharks heavily impacted
- Florida took on a leadership role in shark conservation in response to declines

Sharks are one of the oldest types of animals on earth, having existed for more than 400 million years. As top predators, sharks play a vital role in marine ecosystems by helping to keep fish and other marine organism populations healthy and in proper proportion. Sharks are long-lived, slow to mature, and have few offspring. For example, scalloped hammerheads can live up to 55 years and females do not start producing offspring until around age 15. Unlike many other fish species, which can produce thousands of eggs per spawning event, multiple times per year, most shark species give birth to fewer than 10 pups per litter, and not all mature female sharks produce a litter each year. These life history characteristics make sharks highly vulnerable to fishing pressure and to becoming overfished. This is especially true of large sharks that occur close to shore where they are more accessible to the fishery.

Shark stocks along the U.S. Atlantic coast declined rapidly during the mid-1970s through the early 1990s. Prior to these declines, sharks were seen as an underutilized resource that could be exploited further as a fishery target. Increased fishing pressure associated with the desire to focus fishing efforts on underutilized resources, coupled with an increased demand for shark products, including meat, fins, and other shark products, contributed to the declines in the southeastern U.S. and other parts of the world. Large coastal shark species became preferentially targeted due to their high meat content, large fin sizes, and proximity to land. In response to the steep population declines, Florida began implementing shark fishing regulations in the early 1990s and quickly became a leader in shark conservation.
Florida enacted strict regulations in the early 1990’s, including a prohibition on shark finning (the removal of shark fins at sea and discarding the rest of the shark), before similar regulations were implemented in federal waters and many other states. Many of Florida’s shark regulations continue to be more strict than federal regulations implemented by National Oceanic and Atmospheric Association (NOAA), including holding commercial harvesters to the recreational bag and size limits when fishing in state waters and prohibiting all harvest of 26 shark species.

There are considerable conservation benefits to limiting shark harvest from Florida’s coastal and nearshore state waters. NOAA Fisheries has identified Florida’s coastal waters as Essential Fish Habitat (EFH) for several large coastal sharks, such as the great hammerhead and tiger shark. EFH is defined as waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. Florida’s shallow state waters also contain critical nursery habitat where pregnant female sharks occur in predictable locations at specific times of the year, making them more susceptible to harvest than in federal waters farther offshore where sharks tend to be more dispersed. By limiting or prohibiting harvest of species particularly susceptible to fishing pressure in state waters at this important life stage, Florida is able to provide an extra level of shark conservation while maintaining harvest opportunities for many of these species in adjacent federal waters under the federal regulations.

Florida – A Leader in Shark Management

- Florida led development of strict regulations
- FWC regulations are more strict than those in federal waters
  - Commercial harvesters follow recreational regulations
  - Harvest of 26 species prohibited

Additional conservation warranted in state waters

- Florida’s waters include Essential Fish Habitat (EFH)
- Shallow state waters contain critical nursery habitat
- Pregnant females susceptible to harvest in coastal waters

Great hammerhead EFH in Florida’s state waters (www.sharpfin.nmfs.noaa.gov)
Although shore-based shark fishing has been occurring in Florida for decades, there has been increased attention and interest in the fishery in recent years with some stakeholders passionate about continuing to participate in the fishery and others adamant that management changes are needed. At the April 2018 Commission meeting, staff presented a review and discussion on shark-related issues in Florida with a particular focus on the shore-based shark fishery, including actions staff had taken related to the fishery up until that time. As a result of that presentation and public comment heard at the meeting, Commissioners directed staff to further engage the public on the topic and return with options to enhance management of the fishery at a future Commission meeting.

Today, staff are presenting a summary of public input gathered to date and a series of draft rules for Commission consideration.
During this presentation, staff will discuss a variety of things related to shore-based shark fishing (SBSF). The presentation includes a discussion of concerns that stakeholders have expressed related to this fishery, information on how staff gathered feedback on the topic, and management options that staff presented at public workshops. This will be followed by discussions of a variety of options for improved management of the fishery, including public feedback received on different options, additional considerations relevant to each topic, and finally, staff’s recommended regulatory actions. Staff will also discuss a variety of outreach and education actions that could help address some of the public concerns related to SBSF and improve survival of released sharks.

Finally, the presentation will provide information on shark-related rule cleanup measures that staff propose to implement in conjunction with any changes related to SBSF.
In recent years, conflicts between shore-based shark anglers and other coastal user groups have been increasing. There are a variety of concerns related to this fishery from both the fishing and non-fishing public. One of the most commonly heard concerns from the non-fishing public is that SBSF creates dangerous conditions for swimmers because the activity, including chumming, draws sharks to nearshore waters where people also spend time in the water. Another concern from beachgoers is that the heavy tackle used when targeting sharks poses a safety risk for people in the water or when left on the beach. On the other hand, shark anglers have expressed concern that further restrictions could lead to the elimination or near-elimination of this traditional activity.

Both the shark fishing and non-shark-fishing public have voiced concerns that improper handling techniques used by some participants in this fishery may lead to increased shark mortality, particularly for prohibited species. Post-release shark mortality in the shore-based fishery can be caused by stress on the animal from lengthy fight-times that sometimes occur when bringing the shark to shore, which can disproportionately effect some species, including the great hammerhead. Another potential cause of post-release mortality is injury to a shark’s internal organs which may be caused by bringing large sharks out of the water or damage to gills as a result of being exposed to air.
Staff gathered feedback on SBSF through numerous venues, including 10 in-person public workshops held around the state in July and August 2018. A virtual workshop was available online.

In addition to the public workshops, staff also held in-person meetings with representatives of different stakeholder perspectives, including fishery participants, non-shark-fishing stakeholders, and local government officials. Staff also received significant feedback on this fishery through FWC’s Saltwater Comments online commenting portal and through emails to staff.
This slide includes a list of some of the management options that were discussed at public workshops and through other interactions with stakeholders.

Staff received input on a wide variety management topics that included not making any regulatory changes and implementing a mandatory permit requirement for participation in the shore-based shark fishery in conjunction with an educational requirement for permittees. Other options discussed included creating limitations on chumming from shore and limiting the times of day or places where anglers may participate in SBSF. Additional potential measures for prohibited species that were discussed included limitations on allowable activities for SBSF tournaments and handling requirements for prohibited species of sharks both within and outside tournaments. Other topics discussed included gear requirements for shark fishing from shore and from vessels and limiting or prohibiting SBSF from bridges and piers.
Topics in blue italics on this slide are items that staff recommend moving forward with as part this draft rule proposal as a first step in improving management of this fishery. These items will be discussed in more detail on the following slides. Other items could be explored at a later date if necessary.
When aiming to improve management of this fishery, staff recommends focusing on regulatory actions that will achieve one or more of the following desired outcomes: increased understanding of the shore-based shark fishery, maximizing the survival of released sharks both from SBSF and vessel-based fisheries, and minimizing public safety concerns.

An additional expected outcome of staff’s proposed changes for management of the shark fishery is a reduction in conflicts between shark anglers and the non-shark-fishing public.
There is currently very little information available on the shore-based shark fishery. The level of participation is unknown and we have only a minimal level of understanding about fishery practices. Although attention on this fishery has increased in recent years, it is unknown to what extent fishery participation is increasing or if the increased attention online and in the media is simply making it appear as if participation is growing. Being able to identify participants in the fishery would not only provide information on the size of the fishery, it would also allow for targeted outreach to fishery participants. This would help ensure that all shore-based shark anglers receive information on best handling practices, regulation changes, and other important outreach materials. Being able to identify fishery participants would also lay the groundwork for future research on the fishery and for management if additional changes are desired in the future.

A SBSF permit with an educational requirement has been broadly supported by both fishery participants and non-fishery stakeholders. Staff has also received considerable feedback in support of mandatory education of fishery participants as well as input about the types of information that should be included in an educational requirement, such as species identification and best practices for safely and quickly releasing sharks from shore.
In order to better understand and quantify participation in the shore-based shark fishery, staff recommend creating a no-cost SBSF permit and requiring it for all anglers participating in this fishery unless an angler is exempt from recreational license requirements. In order to receive this permit, anglers would need to first complete an online education component. To ensure that anglers are receiving the most up-to-date education materials available, staff recommend this permit require annual renewal.

In order to determine which anglers need this permit and are subject to any other regulations for the shore-based shark fishery, SBSF would need to be defined. Staff recommend defining SBSF as follows: Any person targeting or harvesting sharks from shore, including from any structure attached to shore such as jetties, bridges, piers, etc. Further, any person who is fishing from shore and using one of the following gears or fishing methods typical of SBSF will be considered a shore-based shark angler regardless of species targeted: using a fighting belt or harness, using a metal leader exceeding 4’ in length, or deploying bait by any means other than casting. Although these gears and methods of harvest may be used to some extent in other shore-based fisheries, anglers using these gears or methods of fishing are more likely to encounter and successfully land large sharks regardless of what they are targeting. Including these anglers in a SBSF permit will allow FWC to ensure they receive the same education as anglers who are intentionally targeting sharks from shore and increase the likelihood of a safe and quick release of any sharks caught unintentionally.
Both shore-based shark anglers and non-anglers alike agree that survival of released sharks is important. The majority of the concerns from non-shark-fishing stakeholders is related to survival of prohibited species. Although there is consensus that shark survival is important, there is not consensus on what management measures or fishing practices are the most likely to improve shark survival. There was general agreement that short fight times and a quick release will increase survival of released sharks. However, shark anglers have often relayed that removing the shark from the water allows for a much quicker release than when the shark is maintained in the water while many non-shark-fishing stakeholders believe that keeping the shark in the water is paramount to ensuring survival.

There was considerable support for potential gear requirements, such as circle hooks, line cutters, and dehookers, that would aid in quick and safe releases in this fishery. There was also some support for requiring heavy tackle in order to give the angler the best chance of getting a shark to shore as quickly as possible.

Staff also heard concerns about shark mortality associated with SBSF tournaments and the pier/bridge fishery. Concerns about SBSF tournaments were typically related to potential impacts to prohibited species by delaying release in order to take measurements and pictures. Stakeholder concerns about the pier/bridge fishery were due to potential impacts from either the additional fight time required to walk the shark down the pier to the beach or from techniques and practices used to hoist large sharks up on the pier/bridge to dehook them, as well as the extended period of time this keeps the shark out of the water.
There continues to be a misconception that the sharks that are prohibited from harvest are prohibited because they are threatened or endangered. Other than the smalltooth sawfish, which is occasionally encountered by shore-based anglers, Endangered Species Act-listed (ESA) species are not impacted by this fishery in Florida. Although some of the species targeted by this fishery are not listed as Threatened or Endangered under ESA, the state of Florida has determined that prohibiting harvest of some of them has a disproportionately high conservation value based on the fact that these species are particularly susceptible to becoming overfished and can be commonly found in predictable locations nearshore, while in adjacent federal waters they tend to be more dispersed. The current level of mortality associated with the shore-based fishery is not believed to threaten the sustainability of these shark populations. However, gill damage can be caused by air exposure and long fight or handling times can increase mortality rates on individual sharks. Circle hooks, which are more likely to hook a fish in the mouth, have been shown to reduce mortality rates of many species. Additionally, non-stainless steel, non-offset circle hooks are already required to target sharks in federal waters, except when using artificial lures or flies.

There are several considerations to consider related to pier/bridge-based SBSF. While FWC’s current Shark-Smart Fishing guidelines do not recommend fishing for sharks from elevated structures like piers or bridges, there are some bridges that have adequate shoreline landing sites that allow for safe and quick release of sharks. Because of the unique geography of the Florida Keys, prohibiting SBSF from bridges would severely limit the ability of anglers to participate in this fishery in that part of the state. Finally, fishing piers in Florida are often municipally or privately owned and many already prohibit shark fishing.
In order to maximize survival of released sharks throughout state waters, staff recommend making a variety of modifications to the management of both the shore- and vessel-based shark fisheries. In order to address concerns specifically related to prohibited species, staff recommend requiring that shore-based anglers release prohibited species of sharks immediately by prohibiting any delay in release beyond what is needed to remove the hook or cut the hook/line. This proposed rule would not apply to vessel-based anglers who can more easily maintain the shark in the water along side the vessel without damaging the shark unnecessarily in order to take photographs and measurements. Staff also recommends requiring that prohibited sharks remain in the water at all times. Anglers would be required to keep the entire length of the shark in the water and to keep the shark’s head in water deep enough to submerge the gills. However, anglers would not be prohibited from lifting the head out of the water briefly in order to remove the hook. This requirement to leave prohibited sharks in the water would be applied to all vessel-based fishers and would apply to shore-based anglers as much as is practical while still ensuring angler safety.

Staff also recommends requiring gear that will aid in safe and quick release of all sharks. Specifically, staff recommend requiring the use of non-offset, non-stainless steel circle hooks when using live or dead natural bait and the possession/use of appropriate cutters. Appropriate cutters would include anything capable of cutting the hook and/or line that the angler is using and may include, but is not limited to, a knife, wire cutters, or bolt cutters. Staff recommends that these gear requirements apply to anglers targeting sharks from either shore or a vessel.

Staff further recommends expanding FWC’s educational efforts on best fishing practices specific to SBSF.
As mentioned earlier in the presentation, there has been significant concern from beachgoers that SBSF in the vicinity of people in the water or where people routinely swim threatens their safety. One of the activities that is particularly concerning to beachgoers is chumming, which swimmers are concerned draws sharks closer to shore and promotes their feeding behavior, potentially near swimmers. Prohibiting chumming from shore was widely supported by all user groups that participated in discussions about SBSF.

Staff received many requests from non-shark-fishing stakeholders to separate SBSF and other beach-related activities because they believe SBSF is “incompatible” with these other in-water recreational activities. These requests were largely related to the potential for hooks and bait to be in the water in proximity to swimmers. Requests were made for both temporal and spatial separation of activities, including requests to prohibit fishing from public bathing beaches and/or guarded beaches, limit SBSF to specific “zones” where SBSF would be allowed, and limiting SBSF to nighttime hours. Additionally, some local governments have requested the ability to regulate SBSF at the local level in order to tailor regulations to the needs of the local community.
One of the most commonly heard concerns from the non-shark-fishing public is that SBSF draws sharks to nearshore waters where people are spending time in the water, potentially endangering those in the water. However, sharks regularly inhabit and feed in nearshore water and there is no credible evidence that fishing increases the likelihood of a shark bite occurring in nearby waters.

In regard to chumming, the majority of shore-based shark anglers report that they do not chum and are therefore not opposed to prohibiting chumming. However, there is the potential that a chumming prohibition may effect non-shark shoreline anglers, including anglers fishing from fishing piers. While some fishing piers in Florida already prohibit chumming, chumming for baitfish or other non-shark species such as snapper is fairly common. There are also non-beach shoreline areas such as mangrove and seagrass fringed areas where chumming would not interfere with other beach-related recreational activities.

Limiting SBSF to nighttime hours only could effectively eliminate the fishery from portions of the state where beach access is limited during nighttime hours. An example of when this might occur is locations where public parking is not accessible after sunset. Additionally, although this fishery is primarily executed at night, some anglers do prefer to fish during the day, especially in parts of the state, such as the Panhandle, without heavy beach use during the day in certain times of the year.

While some stakeholders strongly prefer mandating spatial separation of SBSF and other activities, it would be a significant challenge to establish characteristics for non-SBSF beaches that would apply appropriately and fairly statewide. Allowing local governments to determine how to separate the activities, as many have requested, would reduce FWC’s ability to provide for consistent statewide management of this fishery and would likely eliminate considerable fishery access, concentrating the activity into small areas, and causing additional user conflicts. Finally, mandating physical separation of activities has been highly contentious to date.
In order to address safety concerns related to the shore-based shark fishery, staff recommend prohibiting chumming when fishing from beaches or when wade fishing in areas immediately adjacent to a beach. Since “chumming” and “beach” are not currently defined in FWC rule, both terms need to be defined for the purpose of this management measure. The proposed definition of “chumming” includes the introduction of animal products, real or synthetic, into the water for the purpose of attracting, but not actively harvesting, a marine organism. Bait attached to a hook, placed in traps, or used in conjunction with a trotline used to legally harvest blue crabs would be expressly excluded from the definition of chumming. For “beach,” the proposed definition includes any marine or brackish shoreline that is covered primarily in sand and has enough sand above the mean high tide line to support sunbathing. Prohibiting chumming when fishing from beaches only means that it will not apply to vessel- or pier-based anglers; however, many fishing piers already prohibit chumming.

Staff also suggests working with the fishery to voluntarily separate fishing and non-fishing activities when possible and expanding outreach efforts on best fishing and handling practices.

**Safety Concerns: Management Recommendations**

- Prohibit chumming when fishing from beaches
  - **Proposed “chumming” definition:** animal products placed in the water to attract fish; exclude bait attached to hooks and in traps
  - **Proposed “beach” definition:** marine or brackish shoreline covered primarily in sand; enough sand above water line to support sunbathing
- Work with fishery to achieve voluntary separation of fishing and non-fishing activities
- Expand outreach efforts
Education and outreach will continue to be important components of dealing with issues related to SBSF. Although the education required in order to qualify for the proposed SBSF permit would only be required for permit-holders, staff believes that there is value in making the educational materials available broadly in order to allow access to anyone interested in proper and safe handling of sharks. One thing that is already available online is the Shark-Smart Fishing guidelines that address best practices for shark fishing, including information that addresses maximizing survival of released sharks and minimizing user conflicts. Staff will update these guidelines with any regulatory changes and once finalized, will print the guidelines in brochure format, and distribute it to shark and non-shark anglers that fish from both vessel or shore and to SBSF tournaments.

Staff has also received inquiries from anglers, local governments, and other stakeholders about what can be done with prohibited sharks that wash up on the beach (related to SBFS or not). Since harvest/possession of these species is not allowed, legal methods of removing the shark from the beach has been a source of confusion. Staff would like to address this topic by creating a policy for how to deal with these situations to ensure a consistent agency message and facilitate maximum data collection from these animals.
In addition to SBSF-specific changes, staff recommends improving the clarity and application of FWC’s current shark regulations. Marine Fisheries Rule Cleanup is a long-term, multi-phase project being conducted by staff from Division of Marine Fisheries Management, Division of Law Enforcement, the Legal Office, and regional leadership. The project aims to make marine fisheries regulations more consistent and standardize the language used in fisheries regulations in an effort to reduce complexity and confusion. As part of this long-term project, staff propose standardizing the organization and language in the Sharks and Rays chapter (68B-44) and clarifying the definition of sharks. The definition of sharks in FWC rules is currently overly specific and includes only species expected to occur in or near Florida’s state waters. The proposed definition will still include references to these species but will also include all species of sharks in order to capture any sharks that may be encountered outside of it’s known range or species that may otherwise not be know to commonly occur here.

In 2017, the Florida Legislature passed a bill that implemented increased penalties for anyone found guilty of “finning” (removing fins at sea and discarding the rest of the shark), an activity that has long been a violation of FWC rules. The FWC rule that prohibits finning is included in the requirement to land a shark in whole condition. Updating the requirement to land sharks in whole condition to specifically prohibit landing shark fins that are separated from the shark will facilitate applying the recent Legislative penalty changes for this finning violation.
Staff recommends approving the proposed draft rules to improve understanding of the shore-based shark fishery, maximize survival of released sharks, alleviate human safety concerns, and cleanup and clarify current shark regulations. Related to the shore-based shark fishery and improved survival of sharks encountered by any fishing activity, staff recommend approving proposed draft rules to create a mandatory no-cost, annual SBSF permit with an educational requirement; prohibit chumming from beaches; prohibit delaying release of prohibited shark species for any reason other than removing the hook or cutting the hook or line; require prohibited sharks remain in the water as much as practical while ensuring the safety of anglers (apply to shore- and vessel-based anglers); require the use non-offset, non-stainless steel circle hooks when fishing with live or dead natural bait (apply to shore- and vessel-based anglers); and require the possession/use of appropriate line or hook cutters (apply to shore- and vessel-based anglers).

Staff also recommends cleaning up and updating current rule language related to sharks and updating the rule language that requires sharks to be landed in whole condition to support recent Legislative penalty changes for finning violations.

If approved and directed, staff recommends returning for a final public hearing at the February 2019 Commission meeting.