



## Great Barracuda

Final Public Hearing  
November 17, 2016

**Florida Fish and Wildlife Conservation Commission**  
Division of Marine Fisheries Management

Version 1

This document summarizes a proposed final rule to amend the Florida Fish and Wildlife Conservation Commission's (FWC) barracuda regulations, 68B-60, Florida Administrative Code (FAC). The proposed final rule would establish recreational and commercial size limits for barracuda harvested from south Florida to address population concerns for this species in the region.

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## Review – Barracuda Issue

- Important to anglers for sport, food, and bait
- Important to the recreational diving industry
- Concerns from stakeholders in recent years about status of barracuda populations in south Florida
- Consensus among recreational fishermen, fishing clubs, divers, and academic institutions about a decline in south Florida
- Complex life history makes barracuda difficult to study
- No stock assessments have been conducted for barracuda; however, some available data support concerns heard in south Florida



The great barracuda is a large, fast-growing, predatory fish that is important to many anglers at various sizes for sport, food, and bait. Barracuda is also an important species for Florida's recreational diving industry because encounters with these large, impressive fish are exciting.

In recent years, there have been concerns about the sustainability of the barracuda population in south Florida. Generally, there is consensus among recreational fishermen, fishing clubs, divers, and representatives of academic institutions that there has been a decline in the size and abundance of barracuda.

Barracuda have a complex life history, making them difficult to study. They use inshore areas such as estuaries and bays as nursery grounds, and shift toward nearshore and offshore reefs as they mature. Adult fish exhibit a variety of behaviors, with some fish returning to inshore areas when following food or looking for suitable habitat, while others remain on the reefs. Some adult fish congregate in large schools, while others exhibit a solitary, territorial lifestyle.

In part due to barracuda life history traits, there has been relatively little research to date on the species. Therefore, there is not enough information available to conduct a stock assessment. However, the limited available data from research conducted by the Fish and Wildlife Research Institute (FWRI) and its partners support the stakeholder concerns heard regarding a population decline in south Florida.

## Management Timeline

- Nov. 2014: Review and discussion of barracuda
- Feb./March 2015: Public workshops on potential management options
- June 2015: Commission approved draft rule on potential bag, vessel, and size limits
- July 2015: Additional feedback on proposed regulations received during statewide marine fisheries workshops
- Sept. 2015: Commission approved final rule creating recreational and commercial bag limits and directed staff to gather more public feedback on potential size limits
- Feb. 2016: Additional public workshops held in south Florida
- June 2016: Commission approved draft rule on potential size limits
- Today: Proposed final rule on potential size limits



In recent years, recreational anglers, fishing guides, and divers have expressed concern about observed declines in barracuda populations in south Florida, particularly in the Florida Keys and southeast Florida. In November 2014, staff presented a review and discussion to the Commission regarding the issue and potential causes, including anecdotal reports of increased commercial spearfishing and harvest for use as chum as suggested by stakeholders.

In February and March of 2015, staff conducted two in-person public workshops in the Florida Keys and southeast Florida, as well as an online webinar available to anglers statewide. Based on input from these workshops, the Commission approved a draft rule for bag, vessel, and size limits for barracuda in south Florida at the June 2015 Commission meeting. Additional comments on the status of barracuda and the barracuda fishery were collected at the open-agenda, statewide marine fisheries workshops held in July 2015. At the September 2015 meeting, the Commission approved recreational and commercial bag and vessel limits for barracuda for Collier, Monroe, Miami-Dade, Broward, Palm Beach, and Martin counties. When the barracuda bag and vessel limits were approved, stakeholders voiced mixed opinions about the then-proposed slot limit. Many stakeholders supported the slot limit as proposed while others felt it was too restrictive and would unnecessarily limit their ability to harvest large fish. Therefore, the Commission felt that more public input was needed before moving forward with a size limit and directed staff to gather more feedback and return at a later date.

In early 2016, staff conducted three additional public workshops in south Florida and proposed a draft rule for a slot size limit for south Florida that was approved at the June Commission meeting. Today, staff are presenting a final rule on potential size limits for barracuda.

# Current Barracuda Regulations

In state and federal waters off of Collier through Martin counties:

- Recreational
  - Bag limit: 2 fish per person, 6 fish per vessel
  - Expected to reduce total harvest by ~32%
- Commercial
  - Daily trip limit: 2 fish per person, 6 fish per vessel
  - Expected to reduce total harvest by 6-8%

*These rules became effective Nov. 1, 2015*



Currently, barracuda regulations only apply in the state and federal waters off the south Florida counties of Collier, Monroe, Miami-Dade, Broward, Palm Beach, and Martin. This regional approach addresses the area of concern while not impacting stakeholders outside of south Florida.

The current regulations include a bag limit of two fish per person, and six fish per vessel, which applies to both the recreational and commercial fisheries. These bag and vessel limits went into effect on Nov. 1, 2015.

## Proposed Recreational and Commercial Slot Limit

### Lower limit: 15 inches

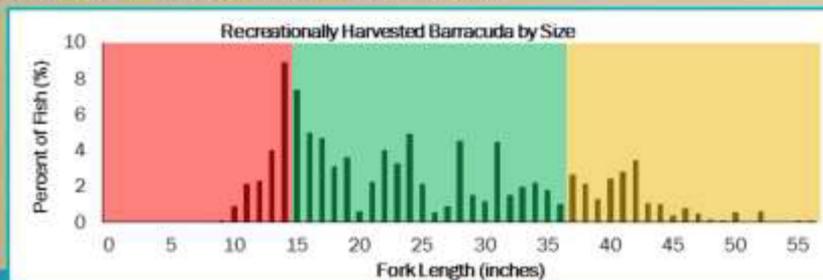
- Protect a large portion of juvenile fish from harvest
- Allow food fishery to continue

### Upper limit: 36 inches

- Fish that survive through the slot and mature would face little harvest pressure
- Conserve large fish for sport fishermen and dive industry

### Over-the-slot allowance: 1 per vessel per day

- Allow continued minimal harvest of trophy fish



At the February 2016 barracuda workshops, most participants felt that, in addition to the bag limit, a size limit was still needed to conserve large fish and help speed the recovery of the local population. Considering the feedback received, staff are recommending the Commission create a slot limit for recreational and commercial harvest of barracuda. The proposed slot limit would include a lower limit of 15 inches fork length and an upper limit of 36 inches fork length, allowing for harvest of fish in between the lower and upper limits (15-36).

Because recreational food fishermen reportedly target barracuda between 12 and 24 inches, a lower size limit of 15 inches would allow the barracuda food fishery to persist while protecting the smallest juvenile fish (those under one year old) that are currently being harvested by some fishermen. This would reduce fishing mortality for the smallest fish and is expected to increase a juvenile fish's chances of surviving to maturity.

An upper size limit of 36 inches corresponds with the size at which females mature (28-39 inches) and would reduce harvest pressure for the majority of mature females as well as many mature males, thus conserving the large spawners that make it through the harvest slot. This is a similar concept to the red drum slot limit, where almost all of the fish inside the harvestable range of the slot limit are immature fish, but large spawners that make it through the slot are protected. The proposed slot limit would also conserve the largest fish, which provide an exciting catch-and-release experience for anglers and are highly valued by south Florida's recreational dive industry.

Based on input received at the marine fisheries statewide workshops in July of 2015 and additional input from 2016 barracuda workshops, staff are also recommending to allow the harvest of one fish over the slot per person or per vessel per day, whichever is less. Potential benefits of this recommendation are discussed on the next slide.

## Proposed Allowance – One Fish Over the Slot

### Over-the-slot allowance: 1 fish per vessel per day

- Some charter businesses rely on their customers' ability to keep a trophy-sized barracuda
- Some stakeholders expressed concerns that the 36-inch upper size limit was unnecessarily restrictive

### Allowing harvest of one fish over the slot per vessel will

- Allow harvest for anglers to pursue potential IGFA records
- Allow continued minimal harvest of trophy fish
- Minimize potential negative economic impacts to charter businesses
- Provide a mechanism for spearfishers to retain a fish that may be oversized



Some charter captains expressed concerns that the upper limit of the proposed regulation (36 inches) was too restrictive for a species that some anglers like to keep as a trophy. These charter captains explained that their businesses rely on their customers' ability to keep trophy-sized fish, and felt their businesses would be unnecessarily negatively effected by the upper limit of the proposed slot limit. In order to mitigate negative impacts on these small business, several of the captains in attendance requested an allowance to harvest one fish over the slot limit.

Based on the concerns expressed by members of the charter industry and stakeholder interest in being able to pursue large barracuda for the purpose of an International Game Fish Association (IGFA) world record, staff recommend allowing the harvest of one fish over the proposed slot limit per person or per vessel per day, whichever is less. This allowance would minimize economic impacts to the charter industry by allowing a trophy fishery to persist and would also provide a mechanism for spearfishers to retain a fish that may be oversized while still conserving the majority of large barracuda.

## Proposed Final Rule

### 68B-60.003 Size Limits (NEW)

- *Establish a slot size limit for recreational and commercial harvest of barracuda from state and federal waters off Collier, Monroe, Miami-Dade, Broward, Palm Beach, and Martin counties:*
  - *Lower limit of 15 inches fork length*
  - *Upper limit of 36 inches fork length*
  - *Allow harvest of one fish larger than 36 inches per person or per vessel per day, whichever is less*



The proposed final rule would create a new rule within 68B-60, FAC, to establish a slot limit with a lower limit of 15 inches fork length and an upper limit of 36 inches fork length for recreational and commercial harvest of barracuda from state and federal waters off Collier, Monroe, Miami-Dade, Broward, Palm Beach, and Martin counties. The proposed final rule would also allow for the harvest of one barracuda over the slot limit per person or per vessel per day, whichever is less. A fish harvested over the slot limit will count toward the harvesters bag limit and the vessel limit.

## Benefits of a Slot Limit for Barracuda

### Biological benefits

- Conservation of large fish improves sustainability because larger fish produce more eggs
- Particularly appealing for barracuda because release mortality is negligible



### Social benefits

- Widely supported management strategy at public workshops
- Accommodates a variety of stakeholder interests
  - Juvenile fish desired by food fishery
  - Allows for harvest of some trophy-sized fish
- Limits harvest of large fish expected to carry a higher risk of ciguatera
- Increases abundance of large fish important to sport fishery and dive industry

### Record of success

- Slot limits have led to rapid increases in large spawning fish in other fisheries, including fisheries with an allowance for 1-fish over the slot



The recommended slot limit strategy would provide many benefits. Biologically, conserving the large spawners in a population can lead to very sustainable fisheries. Given that egg production increases exponentially with the size of a female fish, conserving large fish sustains future recruitment. A slot limit is also particularly well-suited for barracuda because the release mortality of the species is negligible, so larger fish that are caught are very likely to survive if they are released.

There are also many social benefits that may result from utilizing a slot limit strategy for the barracuda fishery. Based on the feedback staff have received, most stakeholders value large fish. A slot limit was the most widely supported strategy of all the size limit strategies considered. Allowing for the harvest of moderate-sized fish would also allow the food fishery to persist, while addressing some of the concerns that stakeholders have regarding consumption of the larger fish which have a higher risk of carrying the biotoxin that causes ciguatera poisoning. The increased abundance of large fish would also be beneficial for both the trophy fishing and ecotourism-based dive industries that depend on large fish.

The Commission's record of success using slot limits is clear for several species of marine fish, including red drum, spotted seatrout, and snook. In these fisheries, slot limits have led to rapid increases in large spawning fish even in those fisheries that allow for one fish over the slot to be harvested, such as spotted seatrout.

## Staff Recommendation

Approve the proposed final rule that, along with the regulations implemented in Nov. 2015, would conserve large, spawning-size fish while accommodating the desires of various user groups in south Florida

- Create a slot size limit effective in state and federal waters off Collier, Monroe, Miami-Dade, Broward, Palm Beach, and Martin counties
  - Lower size limit of 15 inches fork length
  - Upper size limit of 36 inches fork length
  - Allow harvest of one fish greater than 36 inches per person or per vessel per day, whichever is less



Photo courtesy of NOAA

*If approved, make rules effective Jan. 1, 2017*



Staff recommend approving the proposed final rule that, in addition to the regulations already implemented in November 2015, conserve large, spawning-size fish while still accommodating the desires of the variety of user groups in south Florida. Specifically, staff recommend approving the proposed final rule establishing a slot limit for barracuda with a lower limit of 15 inches fork length and an upper limit of 36 inches fork length for both recreational and commercial harvesters in Florida's southernmost counties, and allowing for one fish over the upper size limit per day per person or per vessel, whichever is less in that region.

If approved, staff recommend making the rules effective Jan. 1, 2017.

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

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

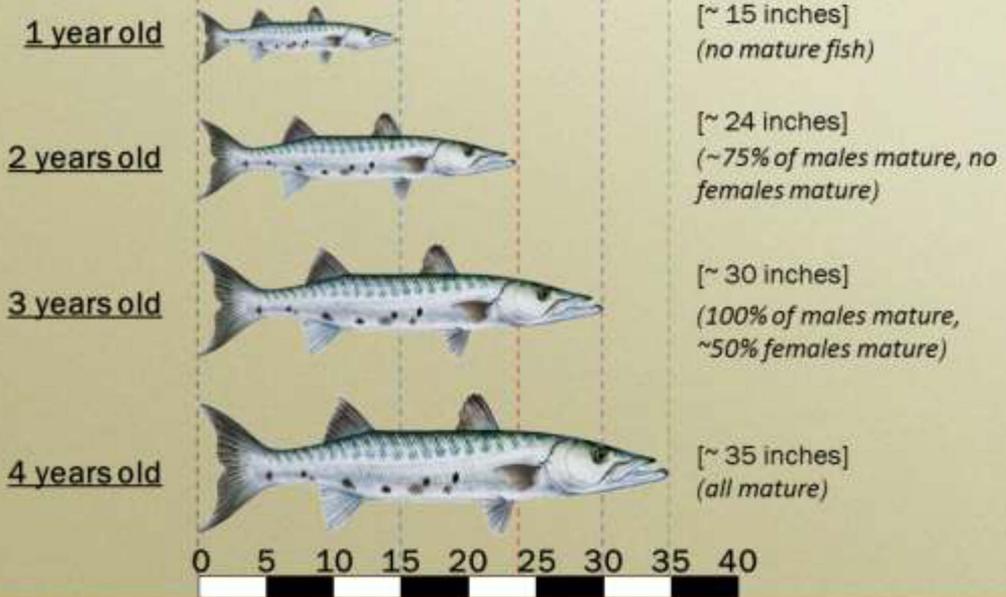


## Life History

- Large predator reaching 15+ inches fork length (FL) in the first year, over 23 inches FL by age 2
  - Adults can reach 6 feet in length, over 100 pounds
- Females reach 18 years of age, males 11
- Females mature between age 2-4 at 28-39 in.
- Males mature between age 1-2 at 25-32 in.
- Spawning is believed to occur offshore during the spring, summer, and early fall
  - Adults use a wide variety of habitats, ranging from inshore seagrass beds, to coral reefs, to deep offshore pelagic waters
  - Some adults appear sedentary and territorial, while others are highly mobile, able to travel hundreds of miles in a single day



# Age and Maturity



## 2016 Public Workshop Summary



- Workshops: Key West, Islamorada, and Jupiter

### Stakeholder feedback

- Most attendees prefer to catch or see large fish
- Majority supported a slot limit
  - Some support for an allowance of one oversized fish
- Some support for minimum size
  - Charter and commercial only
- Concerns regarding ciguatera



In February 2016, staff conducted public workshops in Key West, Islamorada, and Jupiter to gather public input on the preferred size limit strategy for barracuda. Feedback was gathered by public comment, and an in-person survey given at the end of each workshop. In general, staff heard a great deal of support for the bag and vessel limits implemented in 2015. However, there were a few commercial fishers that felt applying the two-fish limit to commercial harvest was overly strict.

Most workshop participants felt that, in addition to the newly implemented bag limit, a size limit was still needed to conserve large fish and help speed the recovery of the local population. Survey results showed that most participants who fish for or view barracuda prefer to target or see large fish (those over 30 inches). As a size limit strategy, the majority of respondents supported a slot limit as the strategy of choice. However, some charter and commercial harvesters supported a minimum size limit only, while some guides and recreational anglers supported a catch-and-release only strategy. For those who supported a slot limit, there was also support for an allowance of one fish over the slot to accommodate the charter industry or others who wish to keep a large fish for a trophy. One general concern from many participants at the workshops was the risk of ciguatera associated with eating large barracuda.

# Effect of Proposed Slot Limit

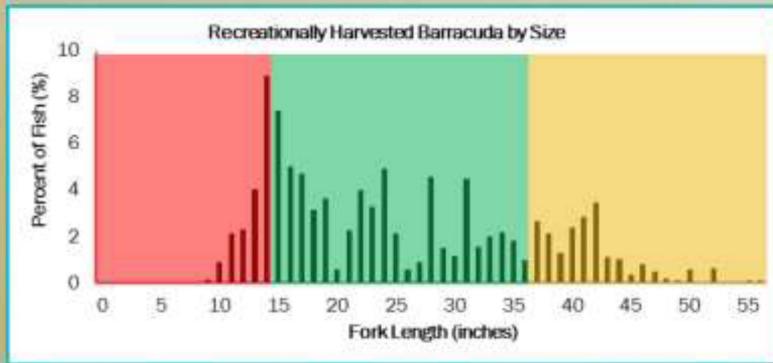
## Min. size limit: 15 in.

- ~27% of recreationally harvested fish are <15 inches

## Max. size limit: 36 in.

- ~27% of recreationally harvested fish are >36 inches

*Size distribution of commercial harvest unknown*



This slide shows the estimated number of barracuda that were harvested above and below the proposed slot limit by recreational fishers in the years leading up to the implementation of the bag and vessel limits.