



Great Barracuda

Final Public Hearing
September 3, 2015

Florida Fish and Wildlife Conservation Commission
Division of Marine Fisheries Management

Version 1

This document summarizes proposed final rules creating a new chapter for great barracuda, Chapter 68B-60, Florida Administrative Code (FAC), within the Florida Fish and Wildlife Conservation Commission's (FWC) marine fisheries regulations. The proposed final rules would establish size limits, a recreational bag limit, and commercial trip and vessel limits for barracuda to address population concerns for this species in south Florida.

Authors: Mason Smith, Kellie Ralston, and Melissa Recks

Report date: August 3, 2015

Great Barracuda

- Large, predatory fish
- Targeted for sport, food, and bait
- Exciting fish important to the recreational diving industry
- Complex life history makes them difficult to study
 - Relatively little research to date
- No species-specific rules
- Default 100 lb recreational bag limit from Florida Statutes
- No commercial trip limit
- No federal regulations



The great barracuda is a large, predatory fish targeted for sport, food, and bait. Barracuda is also an important species for Florida's recreational diving industry because an encounter with these large, impressive fish is exciting for recreational divers.

Barracuda have a complex life history, making them difficult to study. Barracuda use inshore areas, such as estuaries and bays, as nursery grounds and make a 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 appear to exhibit a solitary, territorial lifestyle. There is relatively little research to date on this species, and therefore there is not enough information available to conduct a stock assessment. The available research conducted by the Fish and Wildlife Research Institute (FWRI) and its partners throughout south Florida has focused on their migratory behavior, release mortality, and abundance patterns.

FWC does not currently have any regulations specific to barracuda. Their harvest is subject only to the general statewide fishing regulations. These regulations include a default recreational bag limit for recreational fishers of 100 pounds or two fish per person per day (whichever is greater), set by Florida Statutes for species without specific limits. For example, this could include 20 five-pound fish, or only two 60-pound fish. Harvest over this amount is considered a commercial quantity, and requires a saltwater products license – the general commercial fishing license required for all commercial fishers. There are no barracuda-specific commercial trip or gear limitations in Florida.

There are no recreational or commercial regulations for barracuda in federal waters.

Barracuda – Timeline

- November 2014 Commission meeting: Review and discussion
- Barracuda workshops conducted in Feb. and March 2015
- June 2015 Commission meeting: Draft rule hearing
 - Commission approved staff recommendation and directed staff to return for a final public hearing
 - Slot size limit
 - Recreational bag limit
 - Commercial trip and vessel limit
- July 2015: Additional feedback gathered during statewide marine fisheries workshops
 - Request for trophy fish allowance
 - Conflicting opinions regarding appropriate commercial harvest limits
- September 2015: Final public hearing



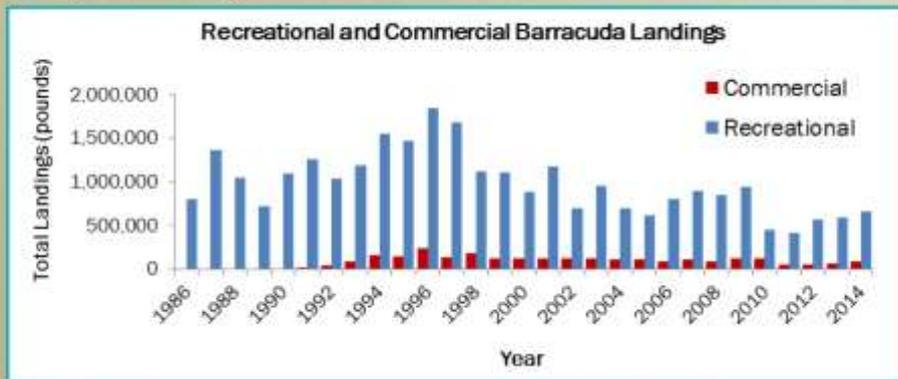
In recent years, stakeholders throughout southeast Florida and the Florida Keys have voiced concerns about declines in barracuda numbers. At the November 2014 Commission meeting, staff presented these stakeholder concerns and the available population data for barracuda. At that meeting, the Commission directed staff to determine if any further scientific information was available and to conduct workshops in south Florida to gather additional information and stakeholder input. Workshops were conducted in February and March of 2015. At the June 2015 Commission meeting in Sarasota, staff proposed a draft rule for barracuda based on all of the available population information, including more recent landings and survey data, and stakeholder input gathered since the November 2014 Commission meeting. The proposal included a size limit for recreational or commercial harvest, a recreational bag limit, and a commercial trip limit. Before approval, the Commission amended the draft rule to include a 20-fish vessel limit for the commercial fishery and directed staff to return for a final public hearing.

Since the June meeting, staff have received additional public input on the proposed barracuda regulations while conducting a statewide public workshop tour in July 2015. Charter captains who attended these workshops in the Keys felt it was important for their clients to be able to continue to harvest a trophy-sized barracuda. In addition, some stakeholders expressed concerns that the proposed commercial 20-fish trip and vessel limit was too high, while some commercial fishers expressed concerns that these same limits would severely impair their business. This input was considered for today's final public hearing.

Barracuda Harvest



- Recreational harvest variable
 - Accounts for about 90% of total harvest
- Commercial harvest statewide relatively stable
 - Majority of landings from south Florida



Recreational harvest of barracuda varies from year to year, but in any given year accounts for about 90% of the total harvest. Statewide commercial harvest levels have remained relatively stable since the late 1990s, with fewer landings in the most recent years. However the majority of commercial barracuda landings currently occur in south Florida, where harvest rates have increased dramatically the last few years.

Regional Management Proposal

- Staff recommend applying regulations to waters off south Florida only
- Extend regulations into federal waters
- Proposed regulatory region: Collier to Martin counties
 - Stakeholder requests for management: Monroe to Martin counties
 - Fish commercially caught in the Keys often landed in Collier County



The proposed management measures discussed in this presentation could be applied regionally or statewide. Staff recommend applying the proposed regulations only to waters off south Florida, and extending those regulations into adjacent federal waters of the region. The federal Councils have stated that they do not intend to manage this fishery in federal waters and do not oppose the extension of state regulations into federal waters for barracuda.

Staff recommend applying barracuda conservation measures in Collier through Martin counties. This region would include the counties where stakeholders have expressed concerns about the barracuda population (Monroe, Miami-Dade, Broward, Palm Beach, and Martin Counties). It would also include Collier County because many of the fish commercially harvested in the Keys are landed in Collier County. Thus including Collier County would reduce confusion over potential transit issues related to bringing barracuda back from the proposed region.

Proposed Recreational Bag Limit

Recommended: 2 fish per person

- Estimated to reduce recreational harvest by 35%
- Would not impact most recreational fishers
 - Less than 20% of trips harvest more than 2 barracuda
- Supported by a wide variety of recreational interests
 - Consensus among workshop participants from south Florida for a recreational bag limit of 2 fish or less



Because harvest is dominated by the recreational sector, a reasonable recreational bag limit would be an effective tool for reducing harvest, while still allowing access to the barracuda fisheries for food and bait. Staff are recommending the Commission implement a two-fish recreational bag limit for barracuda. Based on current recreational harvest information, a two-fish recreational bag limit would be expected to reduce recreational harvest in south Florida by approximately 35%. Since the recreational fishery accounts for roughly 90% of the total barracuda harvest, this reduction is expected to benefit the population and would be in addition to any reductions that might be accomplished by a possible size limit (discussed later in this presentation). This proposed bag limit is not expected to have a negative impact on most recreational fishers because less than 20% of recent recreational trips harvested more than two barracuda.

There is wide public support, particularly in south Florida, for a recreational bag limit. While some participants at the workshops in south Florida (February and March 2015) felt barracuda should be designated catch and release only, or that the bag limit should be one fish per person, there was consensus among the participants that the recreational bag limit should be no more than two fish per person per day.

Proposed Commercial Trip and Vessel Limit

Recommended: 20 fish per person trip limit and per vessel limit

- Expected to decrease commercial harvest by at least 30%
- Would allow a commercial fishery to continue
 - 96% of commercial trips landed 20 or fewer fish
- May reduce likelihood of localized declines at popular fishing and diving areas



Staff are recommending the Commission implement a daily commercial trip and vessel limit of 20 fish for barracuda. At the June meeting in Sarasota, staff recommended a commercial trip limit of 20 fish. The Commission approved this recommendation and directed staff to include a commercial vessel limit equal to the trip limit and return in September for a final public hearing.

While only a small percentage of commercial trips currently land more than 20 fish, these limited number of trips contribute a substantial proportion of barracuda to the overall commercial harvest of the species. A 20-fish commercial trip limit would be expected to reduce overall commercial harvest by at least 30%, which is similar to the expected reduction in recreational harvest (35%) under the recommended 2-fish bag limit. The inclusion of a vessel limit in addition to the trip limit may further reduce commercial harvest. Implementing these recommended recreational and commercial limits would spread the burden of harvest reductions almost equally between the recreational and commercial fisheries. As with the proposed recreational bag limit, this estimated 30% reduction in harvest under the proposed commercial trip and vessel limit is independent of any potential harvest reductions associated with the proposed size limit.

A 20-fish commercial trip limit is high enough to allow a commercial fishery to continue to operate while still reducing overall harvest. This would be accomplished without impacting the majority of the commercial fishery, since approximately 96% of commercial trips land 20 or fewer fish. It would also prevent harvest on the scale of hundreds of fish per trip, which may have contributed to the localized declines in barracuda reported by south Florida stakeholders at popular fishing and diving locations.

Proposed Recreational and Commercial Slot Limit

Recommended minimum size limit: 15 inches

- Protect a large portion of juvenile fish from harvest

Recommended maximum size limit: 36 inches

- Large spawners that survive through the slot would be protected
- Conserve large, exciting fish for sport fishermen and dive industry

Combination of minimum and maximum size limits is expected to lead to additional harvest reductions



Staff are recommending the Commission create a slot limit for recreational and commercial harvest of barracuda. The proposed slot limit would include a minimum size limit of 15 inches fork length and a maximum size limit of 36 inches fork length. The only allowable harvest would be of fish in between the minimum and maximum size limit (15-36 inches fork length). Slot limits have been used successfully in other fisheries, such as red drum, snook, and spotted seatrout, where the Commission desired to manage for both sustainability and the conservation of large fish.

Recreational food fishermen reportedly target barracuda between 12 and 24 inches. A minimum size limit of 15 inches would allow the barracuda food fishery to persist while protecting the smallest juvenile fish (those under a 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.

A maximum size limit of 36 inches corresponds with the size at maturity for females (28-39 inches) and would reduce harvest pressure for the vast majority of mature females as well as many mature males, and thus would conserve 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. An additional benefit to the maximum size limit is that it would 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.

The proposed combination of a minimum and maximum size limit (slot limit) is expected to lead to additional harvest reductions, beyond those expected due to the proposed recreational bag limit and commercial trip and vessel limits.

Based on input received at the marine fisheries statewide workshops in July, staff considered recommended allowing the harvest of one fish over the slot per day per person or per vessel, whichever is less. However, after conducting further outreach on the topic, staff believes the majority of interested stakeholders support the slot limit as originally proposed and would oppose allowing any harvest of barracuda over the proposed maximum size. Additionally, given the magnitude of the perceived decline of barracuda in the region, staff believe the conservation benefits of prohibiting harvest of large, mature fish outweigh the potential negative impacts to charter businesses.

Proposed Final Rules



68B-60.002 Definitions (NEW)

- Specify barracuda as any fish of the species *Sphyraena barracuda*

68B-60.003 Size Limits (NEW)

- For state and federal waters off Collier, Monroe, Miami-Dade, Broward, Palm Beach and Martin counties:
 - Establish minimum size limit of 15 inches
 - Establish maximum size limit of 36 inches

68B-60.004 Bag Limits (NEW)

- For state and federal waters off Collier, Monroe, Miami-Dade, Broward, Palm Beach and Martin counties:
 - Establish daily recreational bag limit of 2 fish per person
 - Establish commercial trip and vessel limits of 20 fish



The proposed final rules would create a new chapter, 68B-60, FAC, for great barracuda. The final rules would create 68B-60.002, FAC, to define great barracuda as any fish of the species *Sphyraena barracuda*. They would also create 68B-60.003, FAC, to establish a minimum size limit of 15 inches, a maximum size limit of 36 inches, for state and federal waters off Collier, Monroe, Miami-Dade, Broward, Palm Beach, and Martin counties; and create 68B-60.004, FAC, to establish a recreational bag limit of two fish per person and daily commercial trip and vessel limits of 20 fish, whichever is less, in these same counties.

Follow-Up: Evaluation of Management Measures

Staff will evaluate the success of the proposed barracuda conservation measures by:

- Continuing to monitor landings and catch rate trends
- Continuing to conduct underwater visual surveys
- Encouraging anglers to report barracuda catch data using mobile applications (apps)
- Incorporating angler-based data into evaluations of the barracuda fishery



Should the Commission decide to create barracuda-specific regulations, as discussed in this presentation, there are several things staff will do to evaluate the success of the proposed conservation measures. Staff will continue to monitor annual landings and catch rate trends for both the recreational and commercial fisheries. Under the proposed changes, harvest rates would be expected to decrease in south Florida, leaving more barracuda in the water for catch and release (sport) fishing, and viewing by recreational divers, as well as to spawn and contribute to future generations of barracuda. The underwater visual surveys conducted by FWRI and our research partners will also continue and will be monitored for any changing trends in barracuda abundances.

In addition, staff will encourage anglers to report barracuda catch data using angler reporting programs such as the Angler Action website and iAngler app developed by the Snook & Gamefish Foundation so that FWRI can incorporate that data into future evaluations of the barracuda fishery.

Staff Recommendation

Approve the proposed final rules to establish species-specific management for barracuda

- Make the following rules effective in state and federal waters off Collier, Monroe, Miami-Dade, Broward, Palm Beach and Martin counties only
 - Minimum size limit of 15 inches
 - Maximum size limit of 36 inches
 - Recreational bag limit of 2 fish
 - Commercial trip and vessel limit of 20 fish

*If approved, make rules effective
November 1, 2015*



Staff recommend approving the proposed final rules establishing a region in south Florida where barracuda regulations apply. These rules will establish a minimum size limit of 15 inches and a maximum size limit of 36 inches for recreational and commercial harvest. The rules will also institute a recreational bag limit of two fish and a commercial trip and vessel limit of 20 fish.

If approved, staff suggest making the rule effective November 1, 2015.

Staff have evaluated the rules under the 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 to the Commission



Life History

- Large predator
 - Reach 15+ inches fork length in the first year
 - Over 23 inches fork length 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 and 4 at 28-39 inches
- Males mature between age 1 and 2 at 25-32 inches
- Spawning is believed to occur in offshore waters during the spring, summer, and early fall



Stock Status Unknown

- No stock assessments for barracuda in Florida
- Recreational landings data show a gradual decline in landings and catch rates since mid-1990s, with landings stable over the last 10 years
- Commercial catch rates variable but stable over the last 25 years
- Underwater surveys have shown a slight decline in the Keys, and a stronger decline in southeast Florida
- Consensus among recreational and commercial fishermen, fishing clubs, divers, and academic institutions of declines in south Florida



No stock assessments are currently available for barracuda in Florida and insufficient data hampers the ability to conduct one. However, there is a limited amount of data available that can be used to infer trends in barracuda abundance. Recreational landings (in pounds of fish) decreased gradually between the mid 1990's and early 2000's, but have been stable over the past 10 years. Commercial landings vary from year to year but have been relatively stable for the last 25 years. While statewide commercial landings have been lower in recent years than the mid 1990s, the landings from Monroe County have increased dramatically the last two years. This corresponds with concerns from stakeholders in the area who have reported increasing commercial interest in this species.

Fisheries-independent information is available from reef fish visual census (RVC) data collected by FWRI and its partners, as well as volunteer-based diver data submitted to the Reef Environmental Educational Foundation (REEF) program. While the RVC surveys did not detect a major decline in barracuda abundance in the Keys, the density of barracuda does exhibit a slight declining trend. An evaluation of the REEF diver data also failed to detect any changes in barracuda abundance through time in the Keys; however, the REEF data does reflect a possible decline in abundance in the area between Jupiter and Key Biscayne during the early to mid-2000s. While

While the limited available data did not reflect a substantial change in barracuda abundance in the region, there is consensus among stakeholder groups in south Florida that there has been a dramatic decline.

Public Input

Feb. and March 2015

- In-person, barracuda-specific workshops held in Key Colony Beach and Dania Beach
- Online statewide webinar
- Discussed a wide variety of possible management options
- Broad support in south Florida for barracuda management
- Lack of support for regulation from other areas of the state



July 2015

- General marine fisheries workshops held throughout the state
- Heard some different views about proposed barracuda regulations
 - Charter captains wanted to be able to retain one fish over the slot
 - Conflicting opinions regarding appropriate commercial harvest limits



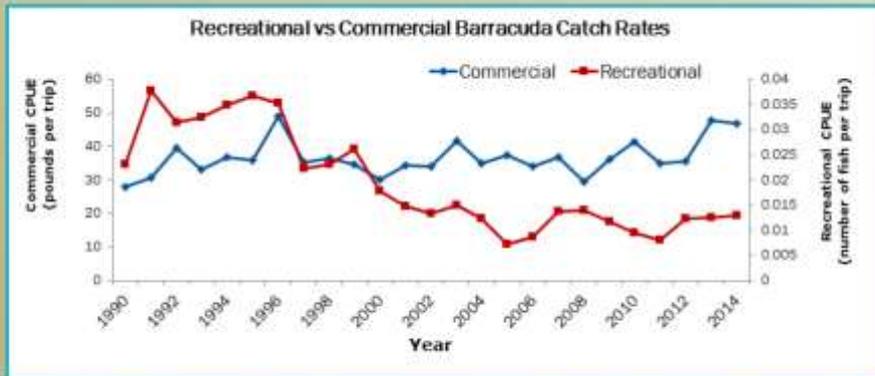
In-person workshops were held in Key Colony Beach and Dania Beach in February to gather input on possible barracuda management in south Florida. Public turnout was high, with over 50 participants at each location. In addition, an online webinar was conducted in early March to gather statewide input, and had 13 individuals participate. During the workshops, staff presented a wide variety of possible management options and an explanation of how each option might affect the barracuda population. Staff also collected public comment and conducted a survey about what management measures stakeholders wanted to see implemented. In general, there was broad support throughout south Florida for additional barracuda management measures. There was an apparent lack of support for additional barracuda management from other areas of the state, based on input gathered from the online webinar participants and additional email correspondence.

While conducting statewide marine fisheries workshops in July 2015, staff heard more input about the proposed regulations from stakeholders. The most prevalent new comments were from charter captains in attendance requesting to be able to keep one barracuda above the proposed maximum size limit and disagreement on appropriate commercial harvest limits. Charter captains who attended the workshops in the Keys felt it was important for their clients to be able to continue to harvest a trophy-sized barracuda. Some stakeholders also expressed concerns that the proposed commercial 20-fish trip and vessel limits were too high, while some commercial fishers expressed concerns that these same limits would severely impair their business.

Catch Rates



- Recreational catch rates declined in the late 1990s, but have been stable for the last 10 years
- Commercial catch rates have been stable throughout recent history



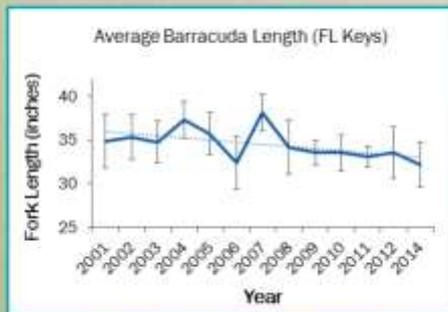
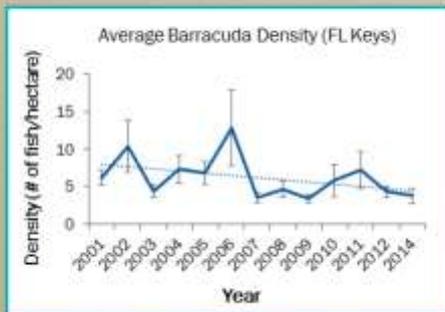
This graph shows the statewide catch per unit effort (CPUE) for both the recreational and commercial sectors for the last twenty-five years. The estimated recreational total harvest of barracuda (in numbers of fish) and the catch per unit effort statewide have both declined since their peak in the mid-1990s, but have stabilized over the past 10 years. The commercial CPUE has been variable but stable over the last twenty-five years.

CPUE can be a general metric of the status of the population, but without additional information about fishing behavior, it is difficult to determine whether or not these trends actually reflect fish abundance.

FWRI Research



- Reef Fish Visual Census (RVC)
 - A count of fish within a given area
 - Conducted on natural reefs
- Barracuda densities variable, with slight declining trend
- Average length of barracuda show slight declining trend



Reef fish visual census (RVC) surveys conducted by FWC's FWRI consist of an underwater survey method in which divers count all fish within a five-meter cylinder of the water column for a standardized period of time. Fish lengths are also estimated (within a 20% margin of error) during the surveys. This method allows researchers to compare trends in the prevalence and size of species encountered during the survey through time. FWRI conducts RVC surveys on natural reefs throughout the Florida Keys. The data summarized here were collected from 2001 to 2014.

While the RVC surveys did not detect a major decline in the abundance of barracuda over the sampled timeframe, the density of barracuda does exhibit a slight declining trend. A slight decreasing trend in the average length of barracuda was also observed.

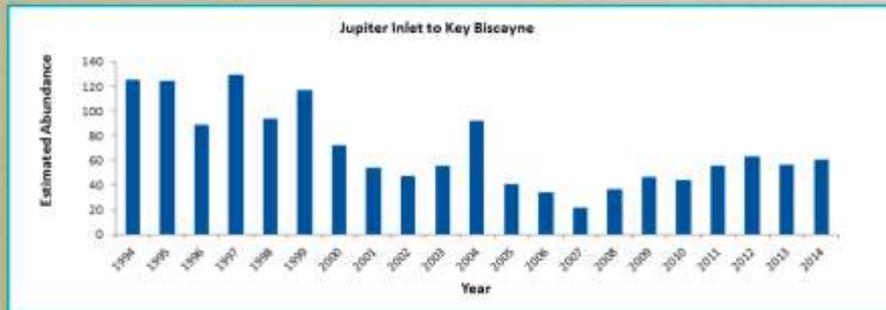
If there has been a major decline in barracuda abundance in the Keys during recent years, the RVC surveys were not able to detect it. However, RVC surveys were not designed to assess the abundance of barracuda and are not ideally suited to this particular species because of their preference for non-reef habitats. The fact that barracuda are not as abundant on reefs as many of the other species captured by the survey, and are therefore observed less frequently and in fewer numbers, results in a greater amount of uncertainty around the calculations of abundance and length than we see in RVC data for other species, which makes it more difficult to detect and assess the observed trends. This uncertainty is greater in some of the early years of the survey shown on the graphs (prior to 2008) when fewer surveys were conducted. Thus, the lack of a strong trend in the recent RVC data may mean that the decline has not been substantial enough to be reflected in the survey results, or it may be a result of the unique behaviors of barracuda and their use of non-reef habitats. The presence of a downward trend in the average length of barracuda does suggest that fishing pressure may have reduced the abundance of larger fish.

Other Fisheries Independent Data



REEF Research

- Volunteer-based diver monitoring program
- No detectable changes through time in Florida Keys
- Declines in the early 2000s in south Florida: Jupiter to Key Biscayne (excluding the Keys)

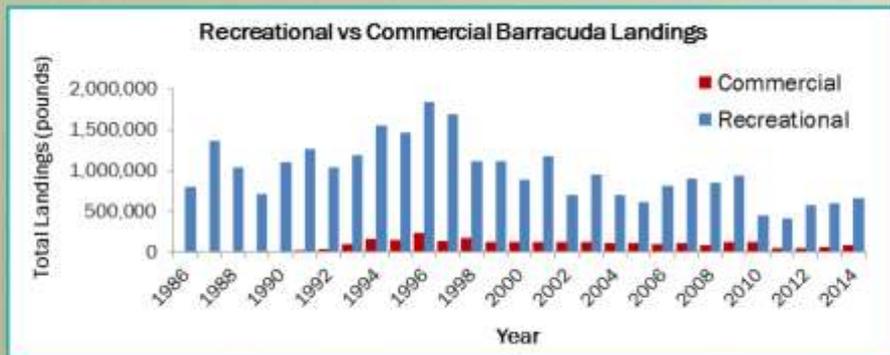


The volunteer-based REEF fish survey project consists of recreational divers who collect data using a visual survey method called the roving diver technique. As opposed to the stationary RVC data collection methods used by FWRI, this data is collected by divers moving along standard transects of a certain length. An evaluation of this data set also failed to detect any changes in barracuda abundance through time in the Florida Keys. However, this data does reflect a possible decline in abundance during the early to mid-2000s between Jupiter and Key Biscayne off Miami. The number of dives used for this data included a range of 236 to 1,896 dives per year in the Florida Keys, and 75 to 306 dives per year in the Jupiter to Key Biscayne region.

Recreational Harvest



- Recreational fishery accounts for about 90% of total harvest
- General public support for a small recreational bag limit
 - Consensus among in-person workshop participants from south Florida for a recreational bag limit of 2 fish or less

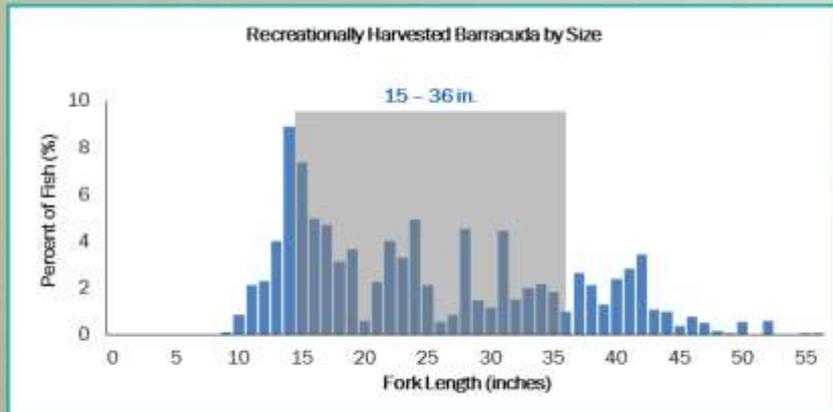


In any given year, the recreational fishery accounts for roughly 90% of the total harvest of barracuda. Because harvest is dominated by the recreational sector, a reasonable bag limit would be an effective tool for reducing harvest, while still allowing access to the barracuda fisheries for food and bait. There is wide public support, particularly in south Florida, for a recreational bag limit. While some participants at the in-person workshops in south Florida felt barracuda should be designated catch and release only, or that the bag limit should be one, there was consensus among the participants that the recreational bag limit should be no more than two fish per person per day.

Slot limit



- Distribution of barracuda harvested ranges from roughly 10 to 53 inches
- A substantial proportion of fish harvested by recreational anglers are below 15 inches, or greater than 36 inches

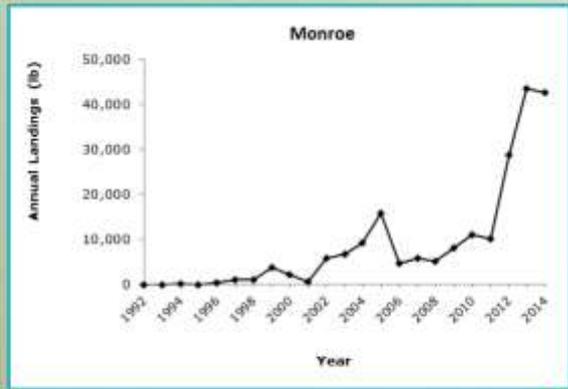
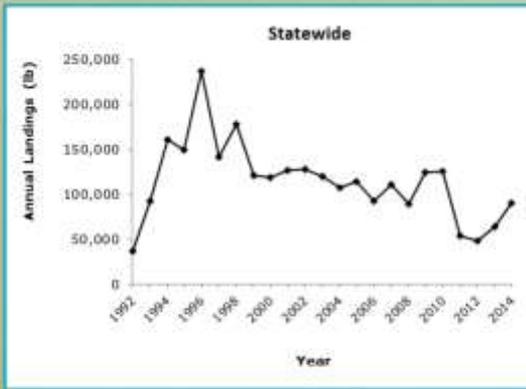


The graph pictured above shows the size distribution of the barracuda harvested recreationally in south Florida over the last five years. The distribution of barracuda harvested in these years ranges from approximately 10 to 53 inches fork-length. The grey box represents the size of fish that would be legal to keep under the proposed slot limit.

Commercial Landings



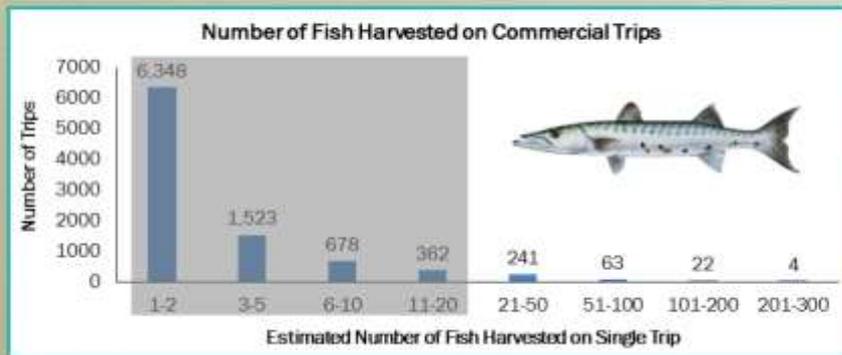
- Fewer landings statewide in recent years
- Recent increases in Monroe County



Commercial landings have been variable over the last 25 years. While statewide landings have been lower in recent years than the mid-1990s, the landings from Monroe County have increased dramatically in recent years, with approximately 43,000 pounds harvested in each of the last two years. Monroe County landings accounted for 67% of the total statewide commercial barracuda landings in 2013 and 47% of the statewide commercial landings in 2014.

Commercial Harvest

- Commercial fishery accounts for about 10% of the total barracuda harvest
- Majority of trips land an estimated 1 to 2 fish
 - Often taken in conjunction with king mackerel and yellowtail snapper fisheries
- 96% of commercial trips landed 20 or fewer fish



In any given year, the commercial fishery accounts for about 10% of the total barracuda harvest in Florida, with the vast majority of trips landing one or two fish. The graph pictured above shows the estimated number of barracuda landed during commercial trips statewide over the last five years. While commercial regulations are typically established based on numbers of fish, commercial barracuda landings are reported in pounds. South Florida fish houses report that the barracudas they buy from commercial fishermen average about 10 pounds per fish. So the pounds of barracuda landed were converted to estimates of the number of fish based on an average of 10 pounds per fish.

Commercial barracuda harvest often occurs in conjunction with commercial king mackerel and yellowtail snapper fisheries. However there are trips where barracuda is the primary target, landing more than 1,000 or even 2,000 pounds per trip (100 fish or more). These trips make up only a small proportion of commercial trips; less than 4% of trips in the past five years landed enough pounds of barracuda to suggest that their harvest rate per trip exceeded 20 barracuda.



Size Limit Considerations

Barracuda are not well-suited for a traditional minimum size limit

- Large size at maturity (28-39 inches for females)
- Recreational food fishery prefers smaller fish
- Perceived risk of ciguatera in larger fish

Recommended approach: Slot limit

- Includes minimum and maximum size limit
- Allows harvest of fish desired by food fishery
- Provides for conservation of both juveniles and spawning-size fish
- Allows juveniles to reach a moderate size before being subject to harvest
- Used successfully for many species including red drum, spotted seatrout, and snook
- Particularly appealing for barracuda because release mortality is negligible



Staff also recommends creating a size limit for barracuda. While we don't know whether or not the reported declines in the numbers of barracuda in south Florida are impacting the productivity of the spawning stock, setting an appropriate size limit would be expected to contribute to harvest reductions and could potentially increase the spawning stock biomass, should that be an issue for this fishery. However, barracuda is not well-suited for a traditional minimum size limit set based on the size at maturity. Barracuda do not reach maturity until they are very large (28-39 inches for females, 25-32 inches for males), but fishermen targeting barracuda for food prefer to eat much smaller fish. Barracuda has a reputation for being prone to high levels of ciguatoxin (the naturally-occurring toxin that leads to ciguatera poisoning in people). While there are relatively few cases of ciguatera in Florida each year and barracuda are not any more prone to carry heavy loads of the toxin than other long-lived reef-associated species, the larger fish are more likely to be carriers of problematic levels of the toxin. Thus limiting harvest to large fish would, for practical purposes, close the food fishery.

For this reason, staff recommend another approach to setting the size limit for barracuda – a slot limit. A slot limit consists of both a minimum and maximum size limit and allows the harvest of the moderate-sized fish within the slot, while protecting the larger spawners. This management approach protects the largest fish in the population from harvest and can be a very effective management tool if coupled with an appropriate bag limit to ensure that some fish survive beyond the maximum size limit. It also sustains future recruitment, because those large fish are the most important contributors to the next generation, given that egg production increases exponentially with size of female fish. The Commission has successfully used slot limits to manage several marine species, including red drum, spotted seatrout, and snook.

A slot limit is particularly well-suited for barracuda because the release mortality of barracuda is negligible, so larger fish that are caught are very likely to survive if they are released.