

Stone Crab



Draft Rule
May 14, 2020



Florida Fish and Wildlife Conservation Commission

Version 2

This is a draft rule hearing to amend the Florida Fish and Wildlife Conservation Commission's (FWC) recreational and commercial stone crab regulations in Chapter 68B-13, Florida Administrative Code (FAC), to modify the stone crab season, size limit, trap construction requirements, and allowance for the possession of whole stone crabs on the water.

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

Background

- One of Florida's oldest and most valuable commercial fisheries
- Popular recreational fishery
- Unique fishery, only claws harvested

Biology

- Live approximately 7-8 years
- Mature before entering fishery
- Spawn throughout spring and summer
- Susceptible to environmental events



Slide 2

Photo courtesy of Heidi Thoricht

Florida's stone crab fishery is one of the oldest and most valuable commercial fisheries in the state with an average annual dockside value near \$30 million. Stone crab also supports a popular recreational fishery. The stone crab fishery is unique in that only claws are harvested and the rest of the crab is returned to the water alive. Both claws may be taken if they meet the minimum size limit.

Stone crabs can live for about seven to eight years. Stone crabs are mature, and may have spawned multiple times, before entering the fishery around age two or three. Spawning occurs throughout spring and summer, from approximately March or April through October. However, recent data from FWC's Fish and Wildlife Research Institute (FWRI) indicates stone crabs are spawning earlier in the spring than in the past and more egg-bearing females are being caught in traps at the end of the harvest season.

Stone crabs are susceptible to periodic environmental events, such as red tides, which can cause fluctuations in local stone crab abundance.

Florida's Stone Crab Fishery

- Primarily harvested using traps
- Statewide fishery but mostly occurs from Big Bend through Miami-Dade County
- FWC manages in state and federal waters

Recreational: Fishing effort unknown

Commercial

- Effort-based management since 2002
- Fishery shifting farther offshore
- Checking traps less often to improve catch rates



Slide 3

Stone crabs are primarily harvested using traps in both the commercial and recreational fisheries. Some recreational harvesters also harvest stone crab claws while diving. Stone crabs are harvested along the entire coast of Florida; however, the vast majority of landings occur from Wakulla County in the Big Bend through the Florida Keys and Miami-Dade County. The South Atlantic and Gulf of Mexico fishery management councils do not have management plans for stone crab and FWC manages this fishery in both state and federal waters.

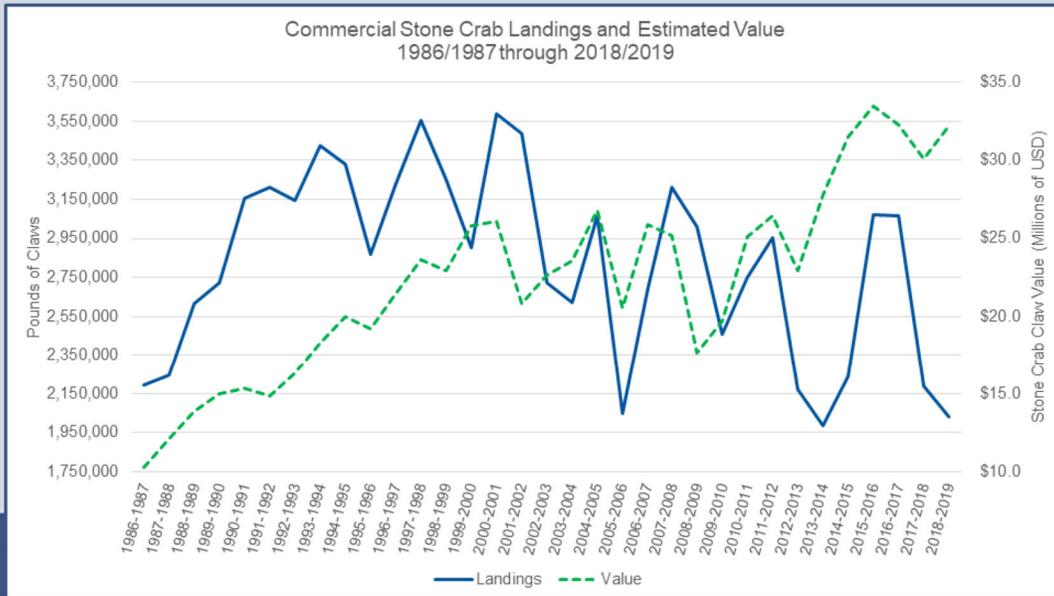
Recreational harvesters are allowed to use up to five stone crab traps per person. Although the level of recreational fishing effort is currently unknown, the recreational stone crab trap registration implemented by the Commission in 2019 will help FWC better understand the scale of the recreational fishery.

Rapid growth in the commercial fishery in the late 1990s led to an excessive number of traps being fished and declining catch per trap. FWC implemented effort-based management in the form of a trap reduction program in 2002 in order to reduce the total number of traps available to the fishery over time. The trap reduction program is intended not only to reduce the number of traps being fished, but to do so while improving catch per trap and not reducing overall harvest.

In recent years, many commercial harvesters have shifted fishing effort farther offshore into federal waters, are fishing more traps, and are checking traps less frequently to improve catch rates and maximize the economic efficiency of their fishing operations. These changes in fishing practices are an indicator of a declining stone crab population closer to shore where the fishery has traditionally operated.

Commercial Landings Trend

- Commercial landings cyclical, declining trend since 2000



Slide 4

Although commercial stone crab landings (blue, solid line) are cyclical with regular high and low landing years, the landings show a long-term decline in average annual stone crab harvest since 2000. Increasing market price (green, dotted line) for stone crab claws has masked the declining landings and has helped offset the increased costs associated with harvesting from a declining population.

Management Changes Needed

Long-term decline in average annual commercial harvest

- Fishery is likely undergoing overfishing
- 22% decline since peak harvest
- Participation high despite lower landings
- Market price keeps fishery profitable

Seafood Watch™ program recently downgraded fishery from “best choice” (green) to “avoid” (red)

- Major retailers stopped buying

Susceptible to periodic environmental events

- Can cause major fluctuations in abundance
- High fishing pressure reduces ability to rebound



Slide 5

Previous FWC stock assessments indicate that the stone crab fishery has been overexploited and has likely been undergoing overfishing since 1997; however, the fact that only claws are harvested makes it challenging to estimate the overall stock status. Average annual commercial stone crab landings have declined by approximately 22% (712,000 pounds) since peak harvest in the late 1990s and early 2000s, an estimated loss of \$8.3 million in potential dockside revenue at current market prices. Despite lower landings, participation in this fishery has remained high because increased market price has kept the fishery profitable.

Monterey Bay Aquarium's Seafood Watch™ program independently evaluates the sustainability of wild-caught and farmed seafood and provides recommendations to help consumers and businesses make seafood choices for healthy oceans. Seafood Watch™ recently evaluated Florida's stone crab fishery and downgraded their recommendation from “best choice” (green) to “avoid” (red), based on concerns about Florida's stone crab stock, current harvest regulations, potential habitat impacts from traps, and potential entanglement of marine mammals. This change has prompted some major retailers to stop buying Florida stone crab, which has negatively impacted the market and is expected to continue to negatively affect it until the Seafood Watch™ recommendation for stone crab is upgraded.

Stone crabs are susceptible to periodic environmental events, such as red tides, which can cause fluctuations in local stone crab abundance. Ongoing high fishing pressure can reduce or suppress a local population's ability to rebound from these types of events.

Management changes are necessary to prevent further decline of Florida's valuable stone crab resource and the fishery it supports.

Proposed Management Approach

Increase stone crab population and build resiliency in the fishery

- Reduce harvest and increase spawning stock biomass
- Decrease interaction with egg-bearing females
- Reduce mortality of undersize crabs
- Reduce release mortality



Combination of management changes will yield largest positive benefit

Collaborative management

- Draft rules informed by industry recommendations
- Original proposal sent to commercial and recreational harvesters for comment
 - Many commercial harvesters believe management changes needed
 - Proposal updated based on feedback



Slide 6

Although FWC has used effort-based management for this fishery since 2002, staff recommends moving forward with a management approach that focusses on increasing the stone crab population and building resiliency in the fishery. This would be done through a suite of management changes that, in combination, are intended to achieve the following goals: reduce harvest, increase spawning stock biomass, decrease the fishery's interaction with egg-bearing female crabs, reduce mortality of undersized crabs, and reduce mortality of crabs after they are released. A combination of management changes is necessary to provide the largest positive benefit to the stone crab population and the fishery.

For several years, staff have been working closely with the commercial stone crab industry to develop management options that would benefit the stone crab population while having minimal economic impacts to the fishery. In early 2020, members of the commercial stone crab industry recommended a suite of management changes. These industry recommendations were considered when developing staff's initial proposal for public comment. Public input on the initial proposal was gathered through small group meetings, phone calls, and emails sent to all commercial and recreational stone crab harvesters. Although many commercial harvesters believe that management changes are needed, some feel that portions of the initial proposal were too restrictive. Staff took all the feedback received into account and updated the original proposal, resulting in today's draft rule proposal.

Management Options Considered

Management changes proposed for public feedback

- Shorten season
- Require escape rings in all traps
- Increase minimum claw size
- Limit possession of whole crabs

Additional options considered but not proposed

- Prohibit removing 2 claws
- Allow purchase of partial trap certificate allotment
- Modify trap reduction program
- Reduce trap certificates



Slide 7

Proposals would apply to commercial and recreational fisheries

Staff considered a variety of management options when developing the rule proposal. The initial proposal that staff sought feedback on included a combination of management changes expected to have a high conservation benefit with minimal negative impacts to the fishery. This initial proposal included shortening the stone crab season, requiring escape rings on all stone crab traps within three years, increasing the minimum claw size, and limiting the possession of whole stone crabs while on the water.

Several other management options were also considered, but are not being proposed at this time. These additional options included prohibiting the harvest of both claws from a stone crab, allowing commercial stone crab harvesters to purchase a portion of their trap certificate allotment each year, modifications to the trap reduction program, and a one-time reduction in the total number of trap certificates available to the fishery.

The proposed management changes presented on the following slides would apply to both the commercial and recreational stone crab fisheries.

Shorten Season

Original proposal for public comment

- Modify start date from Oct. 15 to Nov. 1
- Modify end date from May 15 to April 9

Public input

- Mixed feedback from commercial industry
 - Broad opposition to delaying start of season
 - Some support for ending season early; no consensus on date
- Support from recreational harvesters; preference for shortening end of season

Staff recommends ending season on April 9

- Reduces annual harvest
- Reduces mortality associated with warmer water
- Reduces interaction with egg-bearing females



Slide 8

The first management change in the original proposal for public comment was to shorten the season. The original proposal to shorten the stone crab season was to modify the season to start later on Nov. 1 (instead of Oct. 15) and to end earlier on April 9 (instead of May 15). This proposal received mixed feedback from the commercial industry, with broad opposition to delaying the start of the season. There was some support from commercial industry for ending the season early, but no consensus on how early the season should end; suggestions for an acceptable end date ranged from April 1 to May 1. Recreational harvesters generally supported shortening the season, but suggested only modifying the end date because it protects egg-bearing female crabs.

Based on public feedback, staff recommends only shortening the stone crab season by ending it on April 9, and no longer recommends any change to the beginning of the season. Ending the season on April 9 is expected to reduce annual harvest by at least 10%, bolstering the resiliency of the stone crab population by increasing spawning stock biomass during the spawning season. Ending the season earlier is also expected to reduce mortality associated with warmer water temperatures later in the season and reduce the fishery's interaction with egg-bearing female crabs while still allowing enough landings to maintain a high value fishery. Wholesale and retail seafood dealers may legally possess and sell stone crab claws during the closed season as long as the claws are placed in inventory before the end of the season.

Require Escape Rings

Original proposal for public comment

- Require an escape ring in all traps by 2023/2024 season

Public input

- Overwhelming support from commercial industry
 - Many already using voluntarily
 - Report improved efficiency
- Mixed feedback from recreational harvesters



Staff recommends requiring a 2 3/16" escape ring in all plastic and wood stone crab traps by 2023/2024 season

- Allows undersized crabs and bycatch to escape
- Can be installed in existing traps



Slide 9

To reduce mortality of undersized crabs caught in traps and bycatch of other species, the original proposal for public comment included requiring an escape ring that is at least 2 3/16" in diameter in all plastic and wood stone crab traps by the start of the 2023/2024 season. (Escape rings are already required in wire stone crab traps.)

This proposal has received overwhelming support from commercial harvesters, many of whom already use escape rings voluntarily and have reported improved efficiency in their operations with no reduction in legal catch. Commercial harvesters also support allowing three years to install escape rings in existing traps. Staff has received mixed feedback on escape rings from recreational harvesters, with most of the opposition related to concerns about potential effort and expense associated with installing rings in their existing traps. However, escape rings are relatively inexpensive, costing about \$1-3 each. Stone crab trap manufacturers have been working closely with industry and FWC staff and have committed to modifying trap production molds to incorporate escape rings in new plastic stone crab traps should this requirement be implemented by the Commission.

Staff recommend requiring a 2 3/16" escape ring in all plastic and wood stone crab traps. FWRI research concluded that a single 2 3/16" escape ring was effective at allowing the escape of undersized stone crabs and other bycatch without significantly compromising the catch of crabs with legal-size claws per trap. Escape rings are simple and cost-effective devices that can be installed in existing traps, and staff plan to develop educational materials on installing escape rings in both plastic and wood traps.

Increase Minimum Claw Size

Original proposal for public comment

- Increase minimum claw size by $\frac{1}{4}$ " , from $2\frac{3}{4}$ " to 3"

Public input

- Opposition from commercial industry
 - Moderate support for smaller increase of $\frac{1}{8}$ "
- Mixed feedback from recreational harvesters
 - Varied regionally

Staff recommends increasing size limit by $\frac{1}{8}$ " to $2\frac{7}{8}$ "

- Reduces claw harvest from smaller crabs
- Increases spawning potential



Increase from $2\frac{3}{4}$ " to $2\frac{7}{8}$ "



Slide 10

The next portion of the original proposal for public comment was increasing the minimum claw size limit by $\frac{1}{4}$ " , from $2\frac{3}{4}$ " to 3." The current minimum size limit was established in 1985 and was intended to allow females to spawn for at least two seasons before they entered the fishery.

Staff received significant opposition to the $\frac{1}{4}$ " claw size increase from the commercial industry. Concerns from industry centered on the impact to harvest of medium grade claws. Industry participants were more supportive of a smaller increase of $\frac{1}{8}$ ". Feedback from recreational harvesters was mixed and varied by region. Of those recreational harvesters who opposed the size limit increase, many believe the size increase would eliminate a large portion of their individual catch.

Based on public feedback, staff recommends increasing the minimum claw size by $\frac{1}{8}$ " , from $2\frac{3}{4}$ " to $2\frac{7}{8}$ ". The increase in claw size is expected to reduce harvest of smaller, but still mature, crabs and increase spawning potential ratio when implemented in combination with the other proposed changes. Additionally, an increase in claw size may protect a portion of mature crabs from harvest for an additional season, allowing them to spawn again before harvest.

Limit Possession of Whole Crabs

Original proposal for public comment

- Limit possession of whole crabs on the water to 2 “checker boxes”
 - Checker box up to 3’ x 2’ x 2’ or 12 cubic ft.

Public input

- Broad support from commercial industry

Staff recommends limiting possession of whole stone crabs on the water to 2 “checker boxes”

- Reduces mortality
- Size of checker boxes informed by industry



Slide 11

The final aspect of the original proposal for public comment was limiting possession of whole crabs onboard a vessel on the water to two “checker boxes” with a maximum size of 3’ x 2’ x 2’, or 12 cubic feet, each.

Temporarily holding live stone crabs onboard a vessel at sea is allowed as long as the crabs are stored in shaded containers and wet with seawater at least every 30 minutes. There is currently no limit on the amount of whole stone crabs that can be possessed or how long they can be held before claws are measured and crabs are released. Commercial stone crab traps are typically fished in lines of 50-100 traps and are pulled by crew members while the vessel is underway at idle speed. When a trap is brought on deck, crabs with claws close to the size limit may be placed in checker boxes on deck until claws can be measured for compliance with the regulations. While the majority of harvesters measure and remove legal claws at the end of each trap line, some hold crabs onboard for several hours. A crab’s chance of survival is dramatically reduced the longer it is held onboard because of increased stress and injuries from crushing and fighting.

Most commercial harvesters who use checker boxes report they typically measure claws and release crabs as soon as all traps in a line have been pulled. While there is broad support from the commercial industry for the original proposal, there is some opposition from commercial harvesters in a small portion of southwest Florida. Because of the recreational vessel limit, this proposal is not expected to impact operation of the recreational fishery.

Staff recommends limiting possession of whole crabs on the water to no more than two “checker boxes,” each up to 3’ x 2’ x 2’ or 12 cubic feet. This is expected to reduce the amount of time crabs are out of the water, thereby reducing mortality, while still allowing a harvester to pull a line of traps and set aside crabs that may be close to the size limit to be measured. The proposed checker box size was informed by current practices in the commercial fishery.

Proposed Draft Rules

- *Move end of stone crab season from May 15 to April 9*
- *Require a 2 ³/₁₆" escape ring in all plastic and wood stone crab traps by 2023/2024 season*
- *Increase minimum claw size by 1/₈" to 2 ⁷/₈"*
- *Limit possession of whole stone crabs on the water to 2 "checker boxes," each up to 3' x 2' x 2' or 12 cubic ft.*

Apply to commercial and recreational harvesters



Slide 12

To improve the stone crab population and the fishery, the proposed draft rules would shorten the stone crab season by moving the end of the season from May 15 to April 9; would require a 2 ³/₁₆" escape ring in all plastic and wood stone crab traps by the 2023/2024 season; would increase the minimum claw size by 1/₈" to 2 ⁷/₈"; and would limit the possession of whole stone crabs on the water to two "checker boxes," each up to 3' x 2' x 2' or 12 cubic feet in volume. These rules would apply to both commercial and recreational harvesters.

Considerations



Long-term declining trend in commercial landings

- Likely undergoing overfishing

Changes needed to improve stone crab stock and fishery

- Changes were industry driven
- Proposals developed in coordination with industry
 - Some opposition to magnitude of proposed changes
 - Draft rules reflect compromise based on public feedback

Proposed rule package a significant step in improving the fishery

- Stock assessment expected within 3 years
- Consider additional rule changes if needed in future



Slide 13

There are several things to consider related to potential updated regulations for this fishery. As mentioned earlier in the presentation, there has been a long-term declining trend in landings since 2000 and previous stock assessments indicate that the fishery is likely undergoing overfishing.

Based on the declining trend in landings and the previous stock assessment results, changes are needed to improve the stone crab stock and fishery. Industry recognizes that changes are needed and the proposed changes are industry driven and developed in coordination with industry. However, the original staff proposal was perceived by some industry participants as too restrictive. The draft rule proposal reflects a compromise between staff's original proposal and public feedback.

Staff believes that implementing this combination of proposed draft rules is a necessary step toward improving the fishery. A new stock assessment is expected within three years that will develop and use new bioeconomic models to evaluate management strategies, promote stock resiliency, and improve the economic outlook of the fishery. Based on the results of the updated assessment, additional management changes could be considered in the future if needed.

Staff Recommendation

Approve proposed draft rules to improve stone crab population and build resiliency in the fishery

- Modify stone crab season to end April 9
- Require a $2 \frac{3}{16}$ " escape ring in all plastic and wood stone crab traps by 2023/2024 season
- Increase minimum claw size limit by $\frac{1}{8}$ " to $2 \frac{7}{8}$ "
- Limit possession of whole stone crabs to 2 "checker boxes"

If approved and directed, return for a final public hearing at July Commission meeting



Slide 14

Upcoming EO to allow partial purchase of 2020/2021 trap certificates

Staff recommends approving the proposed draft rules to improve the stone crab population and build resiliency in the fishery. Specifically, staff recommends shortening the stone crab season to end on April 9; requiring a $2 \frac{3}{16}$ " escape ring in all plastic and wood stone crab traps by the 2023/2024 season; increasing the minimum claw size limit by $\frac{1}{8}$ " to $2 \frac{7}{8}$ "; and limiting the possession of whole stone crabs to two "checker boxes." This combination of proposed draft rules is expected to provide a positive benefit to the stone crab population with minimal economic impacts to the fishery. These proposed draft rules would apply to the commercial and recreational fisheries.

If approved and directed, staff will return for a final public hearing at the July Commission meeting.

In consideration of economic impacts from COVID-19, FWC is working toward allowing commercial stone crab harvesters to purchase a portion of their annual stone crab trap certificates. By rule, stone crab harvesters with a trap certificate allotment must pay for each trap certificate they own every year. This allowance would be implemented through an Executive Order and would provide financial relief to the industry by allowing harvesters to only pay for trap certificates for the traps they intend to fish during the 2020/2021 license year.