

MEMORANDUM



To: Florida Fish and Wildlife Conservation Commissioners
From: Jessica McCawley, Director, Marine Fisheries Management
Date: February 26, 2021
Subject: Staff Report – Southwest Red Tide Update: Snook, Redfish, and Spotted Seatrout

Purpose:

Provide an update on snook, redfish, and spotted seatrout populations in southwest Florida following the 2017-2019 red tide event and solicit input on the topic from the Commission and public.

Why:

The Executive Order (EO) limiting these species to catch-and-release only in a portion of southwest Florida will expire on May 31, 2021.

Top Points:

- 1) Red tide is a natural event that occurs most years; however, the 2017-2019 event was severe.
- 2) Long-term monitoring suggests the 2017-2019 red tide did not cause long-term negative effects on snook, redfish, and spotted seatrout. However, a number of stakeholders have serious concerns about going back to the regulations that existed for these species prior to the establishment of the EO.
- 3) There is a wide range of viewpoints on this issue among stakeholders.

Affected Parties:

Anglers and guides who target these species, as well as commercial seatrout harvesters, in southwest Florida.

Summary:

The prolonged 2017-2019 red tide event and associated large-scale fish kills generated public concern, especially for three of Florida's most popular inshore fish species: snook, redfish, and spotted seatrout. Beginning in 2018, FWC responded with a series of short-term conservation measures for southwest Florida, ultimately making these species catch-and-release only from Pasco County through Gordon Pass in Collier County (map in Attachment 1).

FWC monitoring indicates the 2017-2019 red tide event did not cause long-term negative effects on snook, redfish, and spotted seatrout. Though there is general consensus that these species have improved since FWC implemented catch-and-release measures, not all stakeholders agree that normal regulations should resume after the EO expires. Staff is engaging stakeholders to gather additional input prior to the current EO's expiration. Additionally, staff will be evaluating snook and redfish populations through statewide stock assessments of these species and will provide updates to the Commission later in 2021.

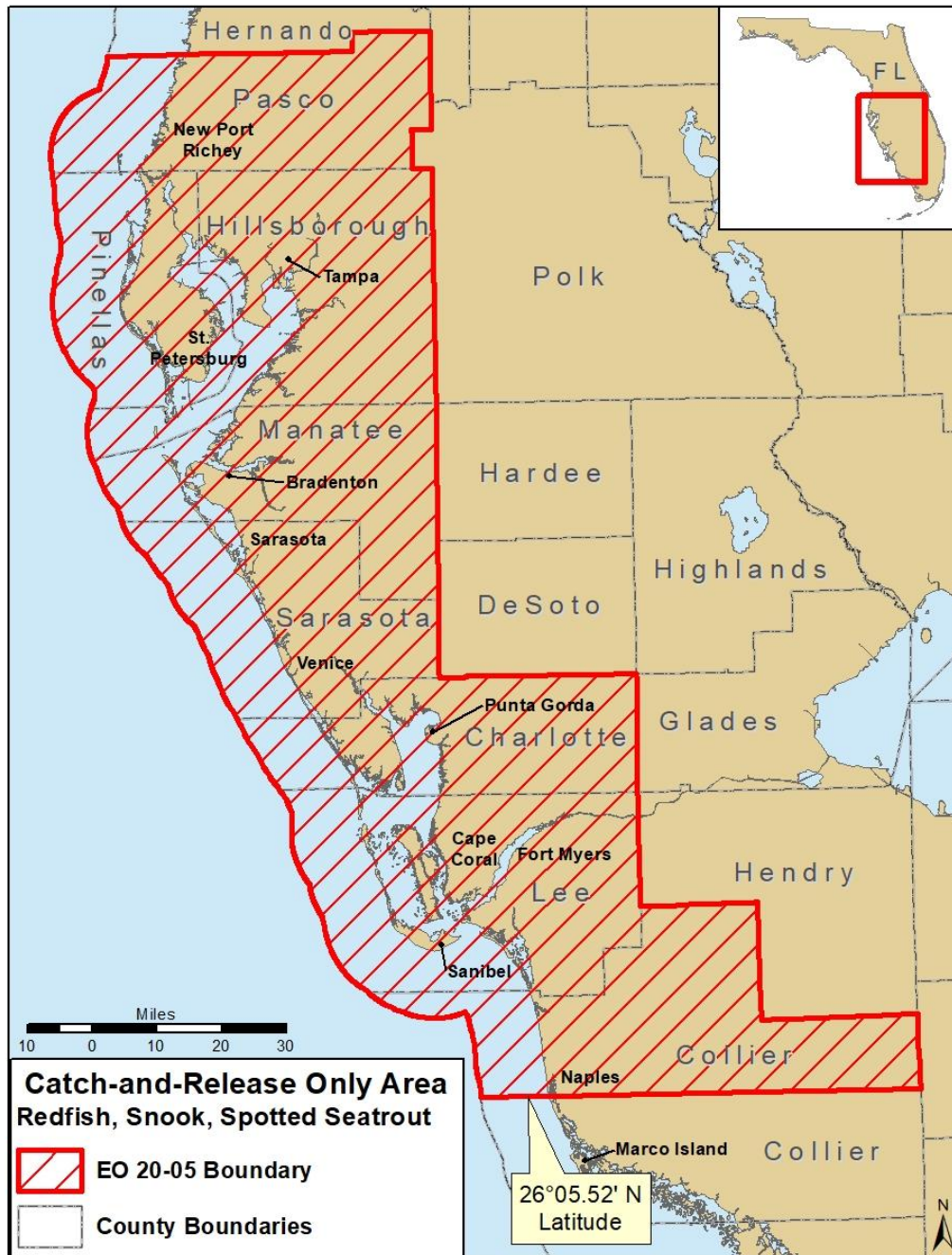
Staff Recommendation:

Staff is seeking input and direction from the Commission on short-term management options for this suite of species once the current EO expires at the end of May.

Staff Contact and/or Presenter:

Jessica McCawley, Director, Division of Marine Fisheries Management
Gil McRae, Director, Fish and Wildlife Research Institute

Attachment 1 – Map of Current Snook, Redfish, and Spotted Seatrout Catch-and-Release Only Area implemented through Executive Order (EO) 20-05.



Briefing Points

Considerations

Executive Orders

- Executive Orders are used to implement temporary measures, and the formal rulemaking process is used to implement long-term management actions.
- There is no need to make a final decision at this meeting about what to do after the current EO for catch-and-release expires. Action can be considered at the May Commission meeting.
- There is no public consensus about what the Commission should do when the EO expires.

Fish Abundance

- Abundance of snook, redfish and spotted seatrout in southwest Florida appears to be increasing.
- FWC monitoring in Tampa Bay, Sarasota Bay, and Charlotte Harbor indicates the 2017-2019 red tide event did not cause long-term negative effects on snook, redfish, and spotted seatrout.
- Anglers and guides report increased fish abundance because of the catch-and-release EOs.
- Though populations have been increasing after being affected by the red tide, fishing guides and others believe the populations were not well off to begin with.

Stock Assessments

- FWRI assessments for snook and redfish will be complete this year and can inform management of these iconic fisheries on a broader and long-term scale.
- The 2019 spotted seatrout stock assessment by FWRI showed seatrout in southwest Florida were above the management target for spawning potential ratio (SPR), but had been declining since 2013.
 - Similar declines were observed throughout the state.
 - FWC addressed declining spotted seatrout SPR with new regulations that took effect in 2020.

Red Tide Affected Fish, Fishermen, and Habitat

- Fish can potentially move away from the unfavorable environmental conditions caused by red tide.
 - Snook are better adapted to do this than redfish and spotted seatrout, because they can inhabit freshwater.
- Fishermen shifted their effort to areas less affected by red tide and where harvest of snook, redfish, and spotted seatrout was allowed.
- Stakeholders believe seagrass habitat was negatively impacted by the 2017-2019 red tide event.

Reopening Harvest and Current Fishing Effort

- Some private recreational anglers and guides believe the normal harvest regulations are outdated and should be tightened before reopening.
- Some anglers are happy with the results of the EOs and would like to the fisheries reopened, whereas others believe the catch-and-release EOs should never have been implemented.
- Effort in southwest Florida appears, and may be, higher than normal. This is attributed to the pandemic.
- A gradual reopening, perhaps beginning with spotted seatrout or with low vessel limits, would take into consideration concerns about increased fishing pressure caused by the pandemic while also providing opportunity for harvest.

Public Opinion

- Staff is engaging the public, including both private recreational anglers and fishing guides, to gather additional feedback and suggestions for management after the EO expires in May 2021.
- Staff will present initial feedback at the February 2021 Commission meeting, and additional public comments will be presented to the Commission at the May 2021 meeting.

Short-term Options for After the Catch-and-release EO Expires

- There is a variety of potential short-term measures that could be taken after the current EO expires and before the Commission addresses the results of the new snook and redfish stock assessments.
- The following options were developed for consideration and are not exhaustive. The public and the Commission may suggest additional options.
- Staff requests Commission guidance and direction on which options to consider further, and whether there are other options that should be taken into account.

Option 1 (no action)

- Allow snook, redfish, and spotted seatrout to reopen under normal FWC harvest regulations, including the new, more restrictive FWC harvest regulations for spotted seatrout.

Option 2

- Open spotted seatrout in the current catch-and-release area under the new, more restrictive FWC harvest regulations.
- Open snook and redfish with a 1-fish per vessel limit for each species in the current catch-and-release area until the Commission decides how to respond to the assessments.

Option 3

- Open spotted seatrout in the current catch-and-release area under the new, more restrictive FWC harvest regulations.
- Extend the catch-and-release measures for snook and redfish in the current catch-and-release area until the Commission decides how to respond to the assessments.

Option 4

- Extend the catch-and-release measures for snook, redfish, and spotted seatrout until the Commission decides how to respond to the snook and redfish assessments.

Red Tide

- Red tide is a naturally occurring microscopic marine algae that has been documented along Florida's Gulf Coast since the 1840s.
 - Blooms, or higher-than-normal concentrations, of the Florida red tide algae *Karenia brevis* occur nearly every year in the Gulf of Mexico.
 - Red tide blooms begin in the Gulf of Mexico, 10 to 40 miles offshore, and can be transported inshore by winds and currents.
 - The onset of red tide inshore most commonly happens in the fall.
 - Red tide does not tolerate freshwater.
- Red tide causes fish kills, animal distress, and human health impacts.
- Fish populations have evolved to be resilient to the impact of red tides.

Recent Red Tides in Southwest Florida

November 2017 – early-February 2019

- Red tide bloom began offshore of southwest Florida and persisted inshore.
- Southwest Florida experienced the greatest impacts of this red tide bloom with large fish kills and human respiratory irritation, which generated negative economic affects.
- It spread inshore, north and south along the Gulf coast several times because of wind and currents.
 - This red tide event reached the Panhandle in September – November 2018 and the east coast (Miami-Dade through Brevard counties) in October 2018.

September 2019 – December 2019

- Red tide observed in low to high concentrations in parts of southwest Florida.
- Some fish kills and respiratory irritation were reported but not to the extent or severity as the previous, prolonged red tide bloom.

December 2020 – February 2021

- Small, patchy bloom detected along and just offshore of Lee and Collier counties, which is subsiding.
- Localized fish kills were reported to FWC.
- For most of 2020, red tide algae were not observed above very low to low concentrations.

Short-term Management Actions (via EO) in Response to Red Tide

- Catch-and-release measures for snook, redfish, and spotted seatrout implemented in response to angler concerns and to allow FWC time to evaluate the impact of the event:
 - *August 2018*: Snook and redfish made catch-and-release only in all waters from Anna Maria Island in Manatee County through Gordon Pass in Collier County.
 - *September 2018*: Catch-and-release measures expanded north through Pasco County, including all waters of Tampa Bay, and extended through May 10, 2019.
 - *February 2019*: Spotted seatrout larger than 20 inches made catch-and-release for recreational anglers from Pasco County south through Gordon Pass in Collier County through May 10, 2019.
 - Same geographic area as snook and redfish catch-and-release measures.
 - *May 2019*: Catch-and-release measures for snook and redfish extended through May 2020. Catch-and-release measures expanded to include all spotted seatrout, regardless of size, for both recreational and commercial fishermen.
 - *February 2020*: Catch-and-release measures for snook, redfish, and spotted seatrout extended through May 2021.
- Suspension of regulations to allow removal of fish killed due to red tide blooms (*August – December 2018; December 2020 – February 2021*):
 - To facilitate removal and disposal of dead fish and marine organisms associated with red tide blooms, FWC temporarily suspended some regulations (e.g., bag limits and size limits) in affected areas.

The Fisheries

Monitoring

- FWC's Fish and Wildlife Research Institute (FWRI) conducts monthly fisheries-independent sampling to monitor the status and relative abundance of inshore fishery species.
 - FWRI produces relative abundance trends based on their sampling. These trends can be used to evaluate localized red tide-related impacts to snook, redfish, and spotted seatrout.
 - The trends in relative abundance are compared to long-term averages.
 - For Tampa Bay and Charlotte Harbor, the long-term averages are based on sampling from 1996-2020.
 - For Sarasota Bay, the long-term average is based on sampling from 2009-2020.
- A sampling year of June through May is used to examine the effects of red tide.
- Data are only available through December 2020.

Snook

- The 2017-2019 red tide event does not appear to have caused long-term negative effects on snook.
- Sub-adult and adult snook abundances in Tampa Bay and Charlotte Harbor appear minimally affected and remain above long-term averages. Abundance in Sarasota Bay may have experienced delayed improvement to the event.
- Young-of-year snook abundance is highly variable.

- Snook are moderately resilient to red tide because they are relatively longer-lived, quick to mature, and can take refuge in low salinity habitats.
 - Maximum age around 20 years.
 - Males mature around age one and can transition to female around ages 3 to 4.
 - Uses both river and estuarine habitats.
 - Under normal regulations (e.g., slot limit and seasons), around 90% of snook are released.

Redfish

- The 2017-2019 red tide event does not appear to have caused long-term negative effects on redfish.
- For sub-adult redfish, monitoring indicates abundance in Tampa Bay has remained near the long-term average since the 2017-2019 red tide event, and it has increased above long-term averages in Sarasota Bay and Charlotte Harbor.
 - Sub-adult abundance was generally below the long-term averages before the event.
 - Note: Adults are not monitored inshore because adults reside offshore.
- Monitoring indicates the 2017-2019 red tide event does not appear to have had a significant impact on young-of-year redfish abundances.
- Redfish can be less resilient to red tide impacts than other inshore species because they are long-lived, slow to mature, and reside in estuaries as sub-adults. Additionally, their spawning season is in the fall when red tide is more common.
 - Maximum age between 35 to 50 years.
 - Reach maturity around age 4.
 - Redfish spawn offshore in the fall and then larvae move inshore, which is when red tide is more common.

Spotted Seatrout

- Abundances of adult and sub-adult seatrout were on declining trends in all three estuaries prior to the 2017-2019 red tide event. The Commission addressed this by tightening spotted seatrout regulations statewide beginning in February 2020.
 - Monitoring indicates the 2017-2019 red tide event likely adversely impacted adult and sub-adult abundance of spotted seatrout in Charlotte Harbor and Sarasota Bay.
- There have been recent increases in young-of-year abundances of spotted seatrout in Charlotte Harbor and Sarasota Bay since 2018. In Tampa Bay, young-of-year abundance declined below the long-term average in 2018 and remains below average in 2020.
- Recent management changes include:
 - Big Bend Management Zone (includes Pasco County):
 - Narrowed the recreational size limit to 15-19 inches, with an allowance of one over-slot spotted seatrout/vessel.
 - Prohibited guides from keeping a bag limit on a for-hire trip.
 - Reduced commercial trip limits from 75 to 50 spotted seatrout/harvester, and from 150 to 100 spotted seatrout/vessel.
 - South Management Zone (includes catch-and-release area except Pasco County):
 - Reduced recreational bag limit from 4 to 3 fish.
 - Narrowed the recreational size limit to 15-19 inches, with an allowance of one over-slot spotted seatrout/vessel.
 - Prohibited guides from keeping a bag limit on a for-hire trip.
 - Reduced commercial trip limits from 75 to 50 spotted seatrout/harvester, and from 150 to 100 spotted seatrout/vessel.
- Spotted Seatrout are reproductively resilient to red tide because they are short-lived, quick to mature, and spawn in the summer.
 - A 2005 red tide reduced the adult abundance of spotted seatrout in Tampa Bay and Charlotte Harbor, but those populations rebounded in 3-4 years.

- Maximum age is 12 years.
- Matures by age 1 and spawns multiple times each year from spring through summer.
- Lives entirely within estuaries.

Public Engagement

Initial Feedback (as of February 12, 2021)

- Initial public feedback on these species and their management in southwest Florida after the 2017-2019 red tide event comes from comments received through the Commission website, emails to FWC, and from conversations staff has had with private recreational anglers and guides.
 - This includes comments given to Executive Director Sutton during meetings with small groups of fishermen and guides in early February 2021.
- Mixed feedback from stakeholders **within** the catch-and-release area:
 - Anglers and charter captains are seeing more of each species.
 - Some believe extending the catch-and-release measures would allow for further improvements.
 - Anglers in the northern portion of the catch-and-release area (Pasco – Manatee counties) are generally happy with the results of catch-and-release EOs and would like to see the fisheries reopened.
 - Some anglers in the southern portion of the catch-and-release area (Sarasota – Collier counties) report conditions are improving but claim they are not back to pre-red tide levels.
 - Some believe snook should remain closed, while seatrout and redfish could reopen.
 - Some concerned about lack of juvenile seatrout.
 - Some stakeholders expressed concern that the fisheries were not doing well before the 2017-2019 red tide event, especially redfish, and suggested the normal FWC harvest regulations for snook and redfish are outdated and should be revisited before harvest is allowed to resume.
 - Charter captains seem split on the topic of reopening or continuing catch and release.
 - Some stakeholders are concerned about habitat (e.g., seagrass) damage caused by red tide.
 - Some guides and anglers have noted fishing effort has increased following the onset of the pandemic and are concerned about what this would mean if harvest was allowed to resume.
- Feedback from **outside** the catch-and-release area:
 - Anglers north of the area report seeing fewer fish and are attributing that to added pressure from anglers coming from the catch-and-release area.
 - South of Gordan Pass in Collier County, anglers report a large increase in fishing pressure due to effort shifting from the catch-and-release area.
 - Anglers remain concerned about the abundance of the three species due to red tide impacts and increased fishing pressure.

Continuing to Gather Input

- Staff will solicit additional input from affected fishermen leading up to and after the February 2021 Commission meeting.
- Staff will present a full summary of public feedback at the May 2021 Commission meeting, ahead of the current EO's May 31, 2021, expiration.

Commissioner Q&A's

- Q: Is staff looking for the Commission to take action at the February meeting?
 - A: No, this item is coming to the February Commission meeting as a “check in” prior to the EO expiring on May 31, 2021. Staff is soliciting public feedback as well, and will continue to engage the public on this issue ahead of the May 2021 Commission meeting. Staff would appreciate Commission input and direction on management options for this suite of species once the existing EO expires at the end of May.

- Q: Over the long-term, do you think that the 2017-2019 red tide event has had lasting impacts to the snook, redfish, and spotted seatrout populations in southwest Florida?
 - A: Based on the life history characteristics of each species and the FWC’s monitoring data, there does not appear to be long-term negative impacts to the populations from the 2017-2019 red tide event. These populations are resilient. Even in extreme red tide events, such as the 2005 red tide, populations recovered relatively quickly.

- Q: Why was the area of Pasco County through Gordon Pass in Collier County chosen for the catch-and-release only area?
 - A: Based on the extent of the red tide bloom and stakeholder input, this was determined to be the most negatively impacted area of the southwest region.

- Q: Is the current red tide event in southwest Florida as severe as the 2017-2019 event?
 - A: The current bloom is small and patchy and only located off Collier and Lee counties. It appears to be subsiding. Staff has no reason to believe the current red tide event will cause long-term impacts to these populations at this time. Staff will continue to monitor the current bloom.