

## Application for an Exempted Fishing Permit (EFP)

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Applicant: Alabama Department of Conservation and Natural Resources  
Marine Resources Division  
AUTH: Scott Bannon, Director  
PO Box 189 Dauphin Island, AL 36528  
251-861-2882  
[Scott.Bannon@dcnr.alabama.gov](mailto:Scott.Bannon@dcnr.alabama.gov)

Point of Contact:

Kevin Anson  
PO Drawer 458 Gulf Shores, AL 36547  
251-968-9694  
[Kevin.Anson@dcnr.alabama.gov](mailto:Kevin.Anson@dcnr.alabama.gov)

**Introduction:**

Recent stock assessments for Gulf of Mexico Red Snapper *Lutjanus campechanus* have indicated the population is recovering from a severely overfished status. As a result of the assessments, the annual catch limit has been increased to its highest levels, yet the federal season length for recreational Red Snapper anglers fishing from privately-owned vessels has been dramatically reduced from 40 days in 2012 to three days in 2017<sup>1</sup>. Increasing catch rates, larger sizes of retained fish, longer state seasons, and use of belated harvest data to monitor catches have made estimating the season length required to stay beneath the catch limit harder to determine<sup>2</sup>. The current data collection program used to monitor recreational landings was not designed to monitor landings in-season, particularly for very short fisheries. Use of an insufficient method to monitor catches in-season, combined with estimated catches exceeding the prescribed catch limit, required fisheries managers to remove a proportion, or buffer, from the annual catch limit prior to calculating the season length. Incorporation of the buffer in season length calculations further reduced the number of fishing days available to anglers.

In order to provide greater stability for the recreational fishery an alternative management strategy is needed which would monitor in-season Red Snapper landings in a timely fashion. Prompt in-season catch estimates would allow fisheries managers the opportunity to maximize season length which would benefit anglers with more fishing opportunities while ensuring harvests stay within prescribed catch limits to protect from overfishing. Additionally, robust fishery-independent information from a small geographic area to characterize the abundance of the local fish population could be used for determining the

<sup>1</sup> - The 2017 federal Red Snapper season was increased from an originally scheduled three days to 42 days through action by the National Marine Fisheries Service.

<sup>2</sup> - SERO-LAPP/DM-2017-01 2017 Gulf of Mexico Red Snapper Recreational Season Length Estimates, NOAA Fisheries Southeast Regional Office

appropriate annual harvest quota that matches the available fish. An alternative management strategy of this design would be more easily tested within a state as states can monitor their fisheries first-hand, have the ability to quickly close a fishery, and have enforcement personnel who can enforce the fishery regulations within the jurisdictional boundaries of the state. All anglers fishing within the state or returning to the state would be under similar regulations minimizing confusion among anglers. In addition, if a state(s) were given the responsibility to manage to a limit, including provisions for paying back overharvest by removing equivalent pounds in the following year, the chances that the combined Gulf-wide catch limit would be reduced ensuring conservation goals for species recovery are maintained.

The dramatic reduction in fishing days experienced in recent years led to an increasing number of dissatisfied recreational anglers. In response to these anglers, Alabama implemented in 2014 a responsive reporting system which offers fisheries managers the ability to monitor landings in-season to ensure the harvest limit is not exceeded. The reporting system, Snapper Check, requires the representative (captain or owner) from a recreational vessel with Red Snapper to report Red Snapper before the fish are landed in Alabama. Landings can be estimated daily, if needed, and compared to predicted landings. If there is a difference between actual landings and predicted landings (due to periods of good or bad weather or changes in fish size or angler fishing behavior) the recreational Red Snapper season could be shortened or increased as appropriate. In 2011, ADCNR/MRD also began a fishery-independent sampling program of artificial and natural reefs designed to estimate the biomass of various resident reef fish species. With these two data sets ADCNR/MRD believes it can implement the management strategy described above.

### **Purpose and Goals:**

The Alabama Department of Conservation and Natural Resources/Marine Resources Division (ADCNR/MRD) is requesting an Exempted Fishing Permit (EFP) to last two years for the purpose of testing an alternative Red Snapper management program. The proposed program will incorporate a habitat-based assessment to estimate the population of Red Snapper off Alabama. A pre-defined proportion of the biomass estimate will serve as the annual catch limit for the following year from which the Red Snapper season for anglers fishing from private vessels and state-licensed charter vessels (not including federally-permitted charter vessels) will be determined. A mandatory electronic reporting program for Red Snapper will be used to track in-season landings by Alabama's recreational anglers and frequently compared against the defined catch limit to ensure the limit is not exceeded.

The use of near real-time landings data to maintain private recreational Red Snapper landings within a biologically defined portion of Alabama's Red Snapper biomass could provide several advantages compared to the current management system by;

- providing a means to monitor the status of the local Red Snapper population on an annual basis and adjust annual harvest levels according to trends in annual population estimates
- increasing fishing opportunities through reduction or elimination of the buffer currently used to mitigate landings data that is available after the fishing season has completed

- increasing accountability for the identified recreational component fishery through mandatory reporting of Red Snapper harvest and ADCNR/MRD enforcement of the reporting provision
- providing additional days to the season if landings are less than predicted due to unforeseen circumstances such as periods of bad weather or diminished economic conditions
- providing appropriate access to artificial habitat developed by private individuals, non-governmental organizations, and the State to enhance local reef fish populations including Red Snapper

The Commissioner of the Department of Conservation and Natural Resources will close the season in Alabama waters when landings are anticipated to reach or meet the catch limit by recreational anglers fishing from private and state-licensed charter vessels. Harvest overages in 2018 from this group will be deducted from the group's available harvest quota in 2019.

**Approach:**

*Fishery-independent monitoring*

Comprehensive data collected independent of commercial and recreational fishing activities provides the best information to assess the status of a fish population. Since 2011, ADCNR/MRD has funded and overseen the implementation of habitat-based assessment methodology developed by researchers at the University of South Alabama. The data collection activities associated with this program encompass areas offshore of Alabama, which include the reef permit zones as well as the natural bottoms to the west of these zones (Figure 1). The gears used for this research include; side scan mapping, video cameras on remotely operated vehicles (ROV), otter trawls, and vertical line and bottom long lines (Figure 2).

Side scan mapping is used to quantify artificial and natural reefs within 2km x 2km sample grids and associate a relative size for each identified reef within four depth strata. This information is used to develop estimates of reef habitat for non-sampled grids, support the random-stratified site selection process for ROV and vertical line sampling events, and identify areas where the trawl can be safely towed and the bottom long line can be placed to avoid entanglement. The ROV video is used by researchers to quantify the number of fish associated with individual reef structures. Lasers on the ROV allow researchers the ability to estimate the length of observed fish which can be assigned ages through the use of age-length keys. The otter trawl is used to sample very young Red Snapper which have not recruited to reef structures and are not selected by the recreational or commercial fishery. Red Snapper catch per unit effort data from otter trawls is used to develop an index of recruitment and can be helpful to explain trends of estimated abundance of older fish using the other sampling gears. Vertical line fishing gear is used to sample fish which are selected by the commercial and recreational fishery and are associated with reef structures. Retained fish are used for determining age and sex of fish. The vertical line sampling protocols mirror those used for the same gear during South East Area Monitoring and Assessment (SEAMAP) sampling events. Fishing gear soak time, number of hooks, and bait used are consistent from reef to reef and year to year so that the information can be compared among years, depth strata, or habitat types. Ages obtained from collected fish are used to assign ages to lengths

obtained from ROV video. Sampling is performed after the conclusion of the Red Snapper recreational fishing. To determine the estimate of Red Snapper off Alabama, mean number of fish per reef type/depth strata is multiplied by the mean number of reefs/depth strata. Red Snapper biomass is calculated by multiplying the estimated number of Red Snapper by reef type/depth strata by mean weight of Red Snapper collected during vertical line sampling. Additional biomass to account for the older Red Snapper which do not spend a large portion of their time around reefs is estimated from multiplying the catches from the bottom longline survey by the amount of open water bottoms estimated from the side scan.

#### *Timely Estimates of Recreational Harvest*

Accurate and timely information are key elements in a monitoring program in order to provide the maximum number of fishing days while ensuring harvest quotas are not exceeded. In 2014, ADCNR/MRD implemented a mandatory reporting requirement for all captains/owners of vessels landing Red Snapper in Alabama. The captain or someone else from the vessel must report the total number of fish harvested before the fish are landed ashore through an app, online, or on blank paper reports supplied at popular public boat launches. The information collected through the Snapper Check angler report includes the following.

- Date
- Time of report
- Vessel registration (USCG documentation/state registration)
- Number of anglers
- Number of Red Snapper retained
- Number of Red Snapper discarded dead
- County of landing
- Type of landing access (private or public)

Angler reported information is validated through a complementary dockside survey of anglers at public boat launches and marinas conducted by ADCNR/MRD staff. In addition to the information collected on a landing report, the dockside survey gathers the following information.

- Length of available fish (fork length)
- Weight of available fish (kg)
- Depth(s) of water where Red Snapper fishing occurred (60' increments)
- Depth of water where the majority of landed Red Snapper were caught (60' increments)
- Habitat where majority of fishing occurred; artificial reef, natural reef, or both
- Whether or not the majority of fishing activity occurred in an artificial reef zone

Adjustments to the angler reported information to account for misreporting or non-reporting of trips are made based on comparing the dockside surveys to reports matching the same vessel registration on the same day. With the adjusted angler provided information, ADCNR/MRD managers can compare estimated Snapper Check landings to anticipated landings at any point during the season. Projections of landings can be calculated for the remaining season based on the mean daily in-season catches and if the projected landings

are larger than the prescribed harvest limit, the season length can be reduced to ensure the quota is not exceeded. Alternatively, if projected landings for the remaining season are lower than the harvest limit (i.e. due to depressed economic conditions or periods of poor weather) the season may be extended.

#### *Determination of the Recreational Fishing Season*

Data from a large-scale tagging program initiated in 2016 indicate aggregate fishing mortality (F) levels near 0.10 within the area identified in this EFP request. In addition, habitat assessment data indicate the mean age of Red Snapper within the EFP area, on both artificial and natural reefs, has increased since 2011. These data suggest the Red Snapper population off Alabama can sustain the recent levels of fishing mortality and as such the annual landed harvest in this study will be set at 0.1 (10% of biomass). The State's Annual Harvest Quota (AHQ) will be determined using pre-fishing season biomass estimates from the habitat-based assessment. Annual estimates of biomass can fluctuate from year to year and the use of a single annual estimate to determine the AHQ could result in less stability for the recreational fishery. Therefore, the AHQ will be determined by calculating an average biomass of the previous three annual pre-season biomass estimates multiplied by 0.10. This is expressed in the following equation.

$$\text{Annual Harvest Quota (AHQ)} = \left( \frac{\text{Sum of 3 Previous Annual Biomass Estimates}}{3} \right) * 0.10$$

Before calculating the recreational sector's portion of the AHQ, an average of the three most recent annual Alabama commercial Red Snapper landings will be deducted from the AHQ. Most of Alabama's commercial landings are from fishermen who fish day trips out of an Alabama port and their predominant fishing areas are within the study area of this EFP request. The portion of AHQ to be used for determining the season length for private recreational and state-licensed charter anglers (PRSLV) will be 57.7% which is the allocation assigned to this group identified in the GMFMC's Reef Fish Amendment 40 (see Appendix A for calculations of the State's AHQ). Federally-permitted charter boats and head boats are not included in this EFP request and the season for this group will be calculated by NOAA Fisheries. The PRSLV quota requested for 2018 and 2019 is 984,291 pounds which is 25.3% of the total Gulf of Mexico's private vessel and state-licensed charter vessel quota.

After the PRSLV allocation is calculated, 10% of the total will be deducted which will serve as a buffer. This buffer will account for the possibility of an increase in fishing effort, fish size, or both compared to 2017 and ensure the final estimated catch remains below the PRSLV's allocation. If the PRSLV allocation is exceeded in 2018, the overage will be deducted from the 2019 PRSLV allocation. ADCNR/MRD could use a smaller buffer to calculate the season length. However, use of a smaller buffer would increase the possibility that 1) the season could close earlier than anticipated which would cause disruptions for anglers who planned vacations and booked trips with state-licensed charter boat owners at the end of the season or 2) overages exceeding the PRSLV allocation would occur which would reduce the number of pounds available for the 2019 season. Fishing seasons for the PRSLV group in 2018 and 2019 will be calculated by dividing the PRSLV allocation by the prior year's mean daily harvest determined from Snapper Check data. The PRSLV allocation and available quota for the 2018 season are provided in Appendix A. The 2019 PRSLV allocation requested

by ADCNR/MRD will be the same as the 2018 PRSLV allocation. Monitoring of PRSLV landings in-season will be accomplished through the Snapper Check program. Snapper Check has been submitted to NOAA Fisheries for certification as a valid management tool. ADCNR/MRD anticipates Snapper Check will be approved before the end of 2017. Within two weeks after the start of Alabama's EFP Red Snapper season a chart depicting the preliminary estimated Red Snapper landings compared to the projected landings will be posted to the ADCNR/MRD website. The chart will be updated with preliminary data each week during the season.

Numeration of fish harvested by commercial and recreational anglers from other states will not occur under this EFP. This source of fishing mortality as well as natural changes to stock size due to recruitment, emigration, and natural mortality will be accounted for through the annual fishery-independent surveys. Using the most recent three-year period of fishery-independent biomass estimates to determine the AHQ will allow for responsive management to changing stock size by adjusting fishing days (effort) to match the most recent trend in biomass.

#### *Enforcement*

The ADCNR/MRD is designated the primary state agency for enforcement of Alabama's marine fisheries laws and regulations. The agency also works cooperatively with other state marine fisheries agencies and NOAA Fisheries' Office of Law Enforcement to enforce federal fishery laws. Patrols of Alabama's nearshore and offshore waters by ADCNR/MRD Conservation Enforcement Officers are performed on a routine basis throughout the year. ADCNR/MRD has recent experience with monitoring fishing activities during incompatible state and federal season including adjacent states with seasons incompatible with Alabama. Snapper Check dockside survey data from 2017 suggest vessel reporting rates of 35% during the federal season which is an increase from 20% and 25% reporting rates in 2015 and 2016, respectively. ADCNR/MRD will continue to enforce the mandatory Red Snapper reporting requirement to improve participation and the precision of the estimates.

#### **Fishing Activities Proposed in the EFP:**

ADCNR/MRD proposes a two-year EFP during which the PRSLV Red Snapper season will be calculated based on a portion of the Red Snapper biomass estimated off the Alabama coast using a habitat-based assessment methodology. Vessels with a federal commercial fishing permit and shares of Red Snapper Individual Fishing Quota (IFQ) and vessels with a federal Charter/Head Boat Reef Fish permit will not be affected by the measures proposed within this EFP. Federally-permitted charter vessels will be able to fish in both federal and Alabama waters during the declared EEZ season established by NOAA Fisheries. Reporting of Red Snapper via Snapper Check will still be required of all of federally-permitted charter vessel captains/owners landing Red Snapper in Alabama. To reduce uncertainty in daily harvest projections and retain continuity of the recreational data for stock assessments, ADCNR/MRD will maintain a 16" TL minimum size limit and two-fish bag limit for Red Snapper caught under this EFP request.

ADCNR/MRD requests inclusion in the EFP all areas of the EEZ off Alabama between the extensions of the state jurisdictional lines of Mississippi and Florida out to 200nm (see

Figure 1). ADCNR/MRD maintains a partnership with the Army Corps of Engineers to manage an extensive offshore artificial reef complex comprising over 1,000 mi<sup>2</sup> in the Exclusive Economic Zone (EEZ) and over 30 mi<sup>2</sup> in state waters. Private reef builders and the State of Alabama have invested considerable financial resources to deploy artificial habitat within the reef complex over the past 30 years and these areas would be encompassed in the proposed EFP.

During Alabama's EFP Red Snapper season, individuals on recreational vessels would be allowed to fish in Alabama waters and the described EFP EEZ waters with the exception that charter vessels possessing only a state charter license would not be able to fish beyond 9 miles. Enforcement of Red Snapper bag and creel limits by ADCNR/MRD enforcement personnel will depend on when the federal season is closed relative to ADCNR/MRD's EFP season. Legal landings from Alabama's PRSLV will occur on those days when the EFP season is open. Vessels fishing out of an adjacent state may fish in the Alabama EFP portion of the EEZ but must abide by their home states' season to remain legal. Federally-permitted charter/head boats operating out of Alabama will be able to fish in EEZ waters offshore Alabama when the NOAA declared season is open. When the NOAA season is closed, these federally-permitted vessels will not be able to harvest Red Snapper during the EFP season. In the past, Alabama has allowed anglers to land Red Snapper in Alabama when Alabama's waters were closed to harvest. This is allowed only when bag and size limits for adjacent state(s) are met for the fish on board the vessel, each of the anglers legally allowed to possess the available catch have a valid license for the adjacent state and the vessel transits from the adjacent state's waters to the Alabama port without stopping (unless during an emergency). Since 2014, Snapper Check has estimated Red Snapper harvests during periods when the adjacent state's Red Snapper season was open. For the foreseeable future, ADCNR/MRD will continue to allow harvests from adjacent state's waters as they have resulted in minimal landings.

In 2018, ADCNR/MRD will begin the fishing season on June 1<sup>st</sup>; however, an earlier start date (i.e. just before Memorial Day weekend) may be used in 2019. A summary of the season calculations will be provided to NOAA Fisheries at least sixty days prior to the proposed season opening or by April 1<sup>st</sup>, whichever is earliest, for review and approval. The 2018 season calculated from the pounds requested within this EFP will be 47 days (Appendix B). The 2018 season will encompass weekend days (Friday-Sunday) and the federal holidays of Independence Day and Labor Day. In addition, the three weekdays of the week of Independence Day are included in the 47-day season.

All of the reports submitted online or through the App are available as soon as they are submitted. Paper tickets will be collected every few days during each week the season is open and entered into the landings database. Dockside surveys collected during the previous week will be entered for matching to reports and calculation of non-reporting and under-reporting adjustment factors. ADCNR/MRD will provide estimates of landings by Friday of each week for the reports submitted through Sunday of the previous week (five-day lag time) in order to ensure landings will not exceed the PRSLV allocation. Once the season closes, final landings will be reviewed to determine if sufficient quota remains from Alabama's PRSLV allocation to warrant reopening the fishery before the end of the calendar year. The exact criteria ADCNR/MRD will use to open a second season are currently unknown.

However, ADCNR/MRD staff will attempt to determine the reason(s) why the PRSLV allocation was not reached and evaluate the length of time adjacent state seasons are open to estimate landings from vessels fishing in adjacent waters. Next, ADCNR/MRD will review the amount of allocation remaining and calculate how many days could be supported by the remaining allocation. If, after review of this information, ADCNR/MRD believes a second season would be beneficial to anglers without posing a significant risk of exceeding the allocation a summary of the calculations and proposed second season dates will be supplied to NOAA Fisheries and publicized with a minimum of one week notice. A second buffer will be applied to the second season to ensure catches remain with the PRSLV allocation. An example of the calculations used in determining the available quota can be found in Appendix C.

**Justification for Issuance of the EFP:**

ADCNR/MRD submits the EFP application to request Red Snapper allocation for the State to use in order to test an alternative form of management for Gulf of Mexico Red Snapper. This two-year program will determine if use of timely data collection can provide for increased access to the Red Snapper fishery off Alabama for a segment of the recreational fishery. The alternative management described in this document entails testing the feasibility of a large-scale program whereby state-specific allocation determined by a habitat-based assessment method can be managed such that catches from private recreational vessels and state-licensed charter vessels are monitored and curtailed, as needed, to avoid exceeding the calculated allocation.

**Vessel Information for Vessels Participating in the EFP:**

Currently, ADCNR/MRD does not have the authority to require private recreational vessels to register for this program; however, ADCNR/MRD will provide NOAA Fisheries a list of vessels that submitted at least one Snapper Check landing report during the previous month by the 5<sup>th</sup> of following month.

**Species Expected to Be Harvested under the EFP, Amount of Harvest, Disposition of Regulated Species, and Anticipated Environmental Impacts (including impacts on fisheries, marine mammals, threatened or endangered species, and essential fish habitat):**

Red Snapper is the only species for which this EFP application applies to. The EFP application includes a request to NOAA Fisheries to allocate 984,291 pounds of Red Snapper to Alabama for the purposes of testing a new management strategy for anglers fishing from private vessels and state-licensed charter vessels that includes timely monitoring of Red Snapper landings to minimize a harvest overage. The anglers on these vessels are expected to utilize similar gears, bait, and fishing areas as they have in recent years and individual bag and size limits will remain the same as in prior years. ADCNR/MRD contends that overall fishing effort will not significantly increase as Alabama license sales and angler registry numbers have not changed significantly over the past several years which could indicate a stable fishery for Red Snapper and other reef fishes.

ADCNR/MRD will continue to conduct the Access Point Angler Intercept Survey under the Marine Recreational Information Program (MRIP) in order to maintain continuity with estimates of bycatch and discards of non-targeted species from the private recreational

sector during the EFP season and outside the EFP season. In 2016, ADCNR/MRD added depth fished and a depth of harvest questions to the Snapper Check dockside survey. During 2016 and 2017, over 90% of the private recreational angler respondents indicated the majority of Red Snapper harvest occurred in water depths of 120 feet or less. ADCNR/MRD staff believe this pattern is due to the closure of other species of reef fish when the federal Red Snapper season has been open and this fishing pattern is anticipated to continue as long as seasons for other species remain closed during the proposed Alabama EFP Red Snapper season.

ADCNR/MRD does not anticipate any negative impacts to marine mammals, threatened or endangered species, or essential fish habitat as a result of EFP approval. The 2017 Marine Mammal Protection Act List of Fisheries considers the Gulf reef fish fishery as a Category III fishery which is defined as a fishery that contributes annual mortality and serious injury of a marine mammal stock that is less than or equal to 1% of the potential biological removal for each mammal stock<sup>3</sup>. Very few dolphins have experienced mortality after interactions with reef fish fishing gear. Bottlenose dolphins are the only marine mammal that have been observed as having interactions with the Gulf recreational reef fish fishery and these interactions are usually associated with depredation of bait and regulatory discards. The last NOAA Fisheries biological opinion for Gulf reef fish fishing authorization related to sea turtles indicated that immediate sea turtle mortalities within the recreational fishery is not a concern relative to jeopardizing the continued existence of sea turtle species primarily because available data suggested sea turtles hooked within the recreational reef fish fishery were released alive and underwent minimal hooking stress<sup>4</sup>.

A significantly longer fishing season compared to recent federal seasons has been projected using the strategy outlined in this EFP; however, it is unclear whether the net annual reef trips (total trips where anglers target Red Snapper in addition to fishing trips where targeting of other reef fish species conducted out of Red Snapper season occurs) associated with Alabama recreational vessels will increase at similar levels. A comparison of MRIP Access Point Angler Intercept Survey (APAIS) directed Red Snapper angler trip data for Waves 3 and 4 of 2016 and 2017 indicates estimated angler trips in 2017 for state and federal waters was 33% higher than the directed effort angler trips estimated during the 2016 federal season<sup>5</sup>. The 2017 federal season during Waves 3 and 4 was open 245% longer than the 2016 season (11 days in 2016 and 38 days in 2017). This increase does not include seventeen days in 2017 when only the state season was open. The difference in percentage increases between angler trips and season length suggests anglers respond to shortened seasons by making sure fishing trips are completed whereas less emphasis is placed on fishing trips during relatively longer seasons as other non-fishing activities are of higher importance. ADCNR/MRD does not anticipate any additional significant impacts to Essential Fish Habitat as a result of this EFP request.

<sup>3</sup> - <https://www.gpo.gov/fdsys/pkg/FR-2016-08-15/pdf/2016-19346.pdf>

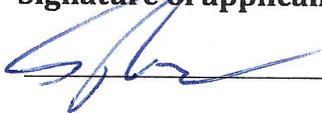
<sup>4</sup> - [http://sero.nmfs.noaa.gov/protected\\_resources/section\\_7/freq\\_biop/documents/fisheries\\_bo/03584\\_gom\\_reef\\_fish\\_biop\\_2011\\_final.pdf](http://sero.nmfs.noaa.gov/protected_resources/section_7/freq_biop/documents/fisheries_bo/03584_gom_reef_fish_biop_2011_final.pdf)

<sup>5</sup> - Personal communication from the National Marine Fisheries Service, Fisheries Statistics Division, 11/20/2017.

**Approximate Times and Places Fishing Would Take Place Under the EFP:**

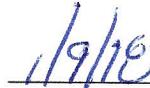
Fishing activities associated with this EFP would take place primarily on weekend days (Fri-Sun) during the summer months of June-August for 2018 and 2019. If significant quota remains after the first season, a short fall season may occur during October or November in both years. Fishing will occur in Alabama state waters and EEZ waters extending immediately south of Alabama's state waters to 200nm.

**Signature of applicant:**



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Scott Bannon, Director  
Alabama Marine Resources Division



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Date

# FIGURES

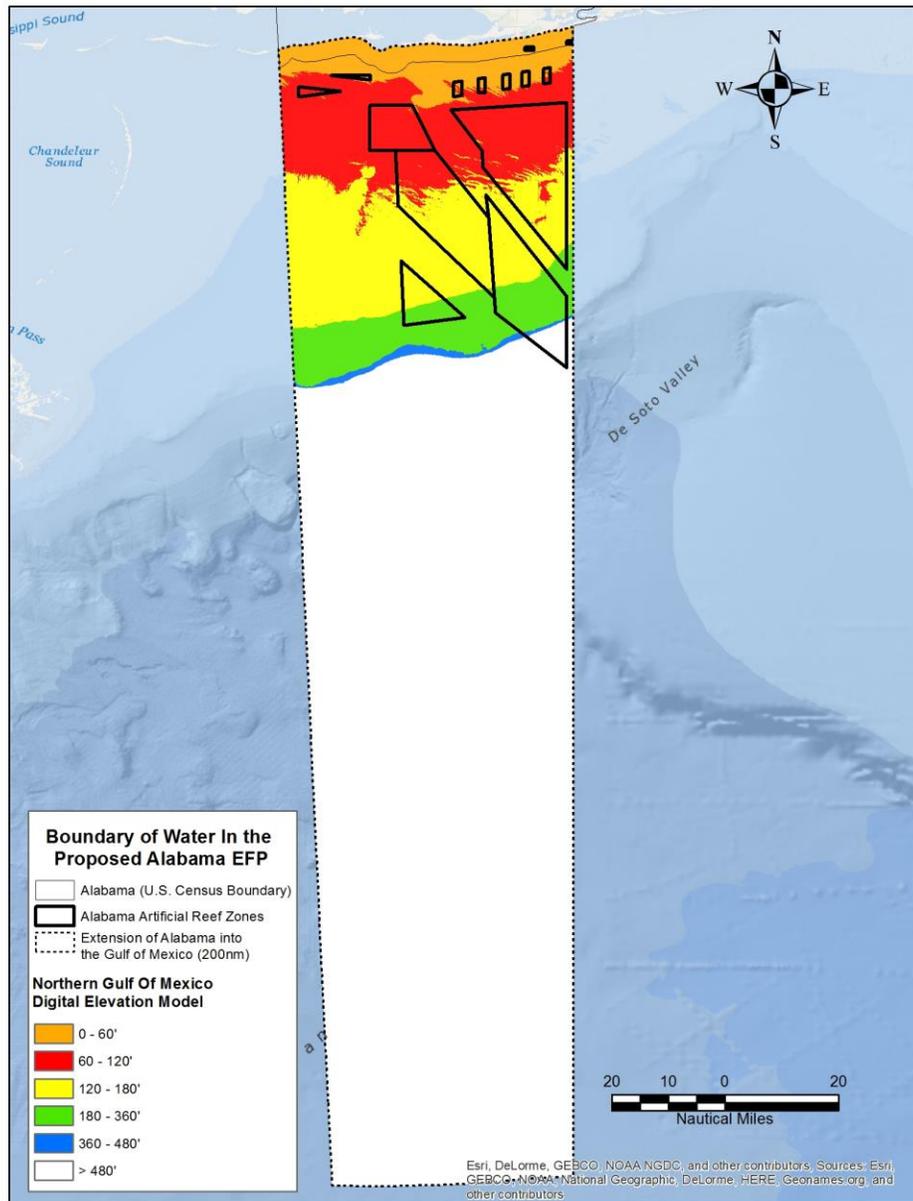


Figure 1. The Exempted Fishing Permit boundaries proposed for inclusion in Alabama Dept. of Conservation and Natural Resources/Marine Resources Division’s alternative Red Snapper management strategy.

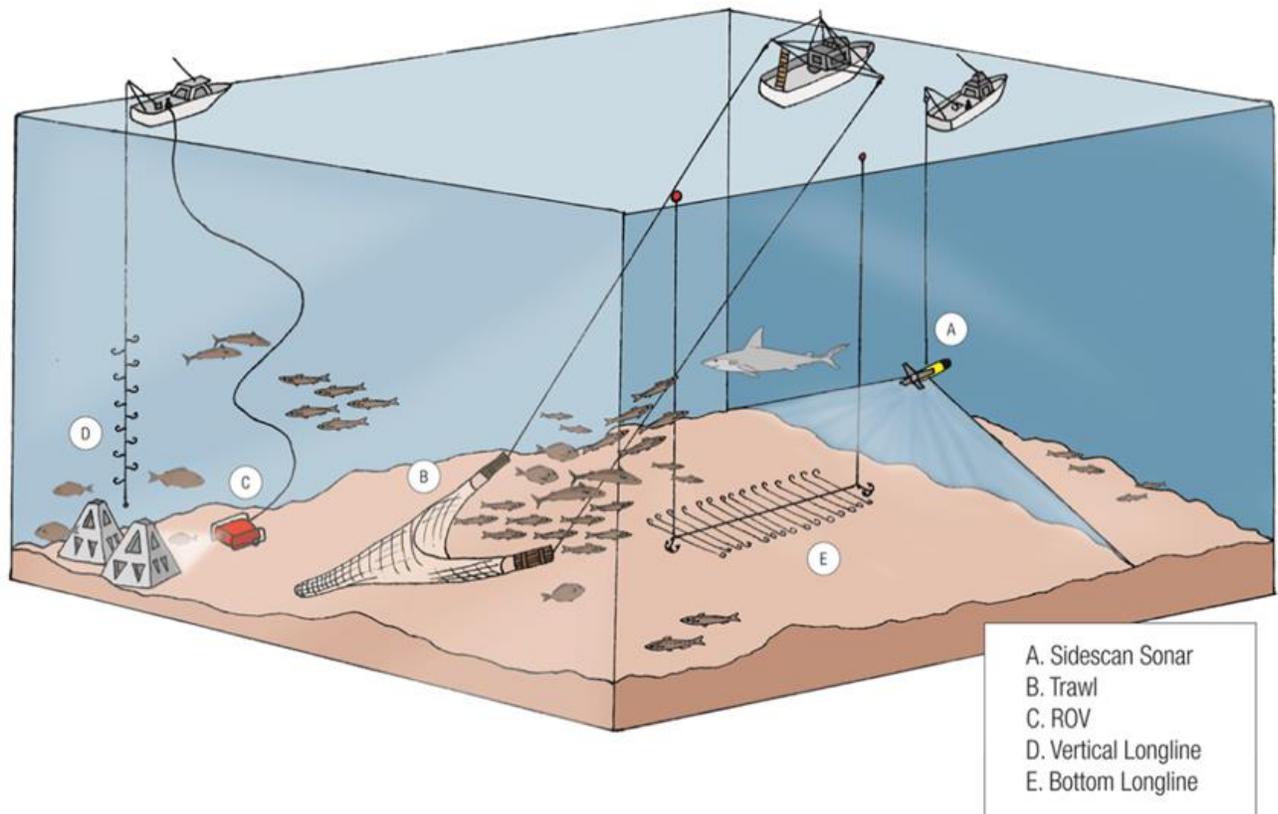


Figure 2. Fishery-independent gears utilized for the Alabama Red Snapper habitat-based assessment.

## APPENDIX A

### Calculations for the 2018-2019 EFP Private Recreational and State-licensed charter vessel (PRSLV) Allocation.

Three-Year Mean Annual Biomass Estimate (2014-2016):	19,912,280	
Alabama Annual Harvest Quota (AHQ)-10% of Mean Biomass Estimate:		<b>1,991,228</b>
Three-Year Mean Annual Comm. Landings:	285,351	
Total Alabama Recreational Allocation:		<b>1,705,877</b>
Private Rec. /State-licensed Charter Allocation (57.7% of AL Rec Allocation):		<b>984,291</b>
Private Rec. /State-licensed Charter Allocation Buffer (10%):	98,429	
Private Rec. /State-licensed Charter Allocation (pounds):		<b>885,862</b>

## APPENDIX B

### Calculations for 2018 Private Recreational and State-licensed charter vessel (PRSLV) Season Length.

2018 Fishing Season	No. Weekend Days (Fri- Sun & Fed Holiday)	No. Weekday Days	Total Days	2017 Private Angler Mean Daily FED Season LBS	2017 State Charter Angler Mean Daily FED Season LBS	2017 Mean Daily LBS	Total Est LBS
June	14	0	14	19,727	1,519	21,246	297,444
July	14	3	17	14,921	1,564	16,485	280,245
August	13	0	13	14,921	1,013	15,934	207,142
Sept	<u>3</u>	<u>0</u>	<u>3</u>	8,309	1,030	9,339	<u>28,017</u>
<b>TOTALS</b>	<b>44</b>	<b>3</b>	<b>47</b>				<b>812,848</b>

## APPENDIX C

### **Private Recreational and State-licensed charter vessel (PRSLV) Second Season Quota Distribution Scenario:**

2018 PRSLV Quota Distribution:	885,862
Initial Season PRSLV Harvest Total:	812,848
Initial Quota Distribution Remaining:	73,014
Initial Season Buffer Remaining:	98,429
Pounds Remaining from Initial PRSLV Quota Distribution & First Buffer:	171,443
Second Buffer Amount (10%):	17,144
Second Season PRSLV Quota Distribution Available:	154,299