Exempted Fishing Permit (EFP) Application

1. Date Submitted:

17 April 2023; resubmitted with revisions 4 May 2023

2. Research Start/End Date:

1/1/2024 - 12/31/2024

3. Project Coordinators:

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4. Point of contact:

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5. Purposes and goals:

The Center for Fisheries Electronic Monitoring at Mote (CFEMM) is strategically positioned to respond to National Oceanographic and Atmospheric Administration (NOAA) and Gulf of Mexico Fishery Management Council needs to address bycatch reduction through established collaborations with commercial fishing industry stakeholders, and state and federal management agencies. The CFEMM is seeking a 12 month NOAA National Marine Fisheries Service (NMFS) Exempted Fishing Permit (EFP) to assess the efficacy of an “optimized retention” management strategy in the eastern Gulf of Mexico commercial reef fish fishery with red grouper, *Epinephelus morio*, as the test species. For this fishery, we refer to “optimized retention” as a spatially-explicit management tool that allows for increased retention in areas prone to high discard

mortality. The goal of this project is to improve catch utilization and eliminate red grouper discards in high-mortality spatial areas by allowing for research-scale retention of undersized red grouper with minimal impacts to the stock and improved sustainability for the fishery as a whole. This pilot project will be tested with participation of three federally permitted reef fish bottom longline (BLL) vessels with electronic monitoring (EM) systems, which use multiple cameras and sensors to record fishing activity, catch, and discards. The proposed EFP activity is a component of a National Fish and Wildlife Foundation (NFWF) Electronic Monitoring and Recording (EMR) grant No. 76682 to commence May 2023.

Based on more than six years of EM data collected by the CFEMM, spatial differences in discard and mortality rates exist and are related to depth. In the primary red grouper fishing area inside of 35 fathoms, the average observed discard rate of red grouper is 46.7%, while outside of 35 fathoms, the rate drops to 18.7% due to limited interactions with undersized red grouper (Appendix I, Figure 1). Post-release status data collected through stern mounted cameras has shown that for red grouper caught shallower than 35 fathoms, 25% of discards float away and are assumed dead. This rate is higher for fish caught deeper than 35 fathoms, with 42.7% being assumed as immediate mortalities by not swimming down. These derived estimates are a minimum for this gear type, given the added stressors on discarded individuals that have been documented through the Center's EM program, including poor catch handling (excessive time on deck) and non-existent or improper venting, which may also make the discards more vulnerable to depredation or mortality. With the difficulties of enforcing management strategies to address handling concerns, there is a potential for an even higher rate of discard mortality in the eastern Gulf BLL fishery, especially at greater depths. Red grouper discard mortality may even exceed 75% based on studies within hyperbaric chambers (Burns, 2009) though the accepted discard mortality rate for red grouper on BLL gear is 44.1% (SEDAR, 2018).

The optimized retention management strategy will require retention of all undersized red grouper outside of 35 fathoms from three BLL vessels equipped with EM systems during their normal fishing operations. The 35 fathom threshold was informed by over six years of EM data, which suggests that approximately 3,000 lbs. of undersized red grouper that are projected to be subjected to high post-release mortality (and thus lost to both the fishery and the population) would be sustainably retained. Furthermore, the 35 fathom threshold utilizes a pre-existing boundary for the summer BLL inshore closure from June to September (NOAA, 2009). Both the scientific and management rationale opportunistically align, reinforcing the significance of this boundary and easing compliance. Under the EFP and subsequent project, participating vessels will be required to have their EM systems turned on for all fishing activities. When the vessels operate outside of the 35 fathom boundary at any time of the project year (2024), they will maintain permission under the EFP to retain undersized red grouper until the three vessels collectively reach the 3,000lb limit, effectively limiting discards of that species to zero in that fishing zone. When fishing inshore of the 35 fathom boundary the participating vessels will be required to discard all undersized red grouper and adhere to their current fishery's regulations.

Red grouper deemed undersized and retained within the spatial restriction zone will be

fitted with unique tags supplied to each vessel for the explicit purpose of this project. The identifier will facilitate dockside sorting where these marked individuals will be weighed separately to ensure that the poundage from undersized red grouper will be subtracted from the allowable amount under the EFP. Undersized red grouper will be weighed and processed through the Individual Fishing Quota (IFQ) system and assigned their own separate category on the weigh-out ticket, which will denote any pricing differences. The cost of lease for these fish will be covered through the already-awarded CFEMM NFWF EMR grant via reimbursement to vessel owners regardless if quota was explicitly leased to cover the poundage of undersized red grouper. The tagged fish will be further utilized by Florida Fish and Wildlife Conservation Commission (FWC) dockside samplers who will obtain biological data (e.g. length measurements, otoliths). The FWC will provide the otoliths with corresponding individual fish information to the NOAA Panama City Lab for aging. Lastly, these fish will be sold by IFQ dealers who are associated with the EFP to assess marketability of the undersized red grouper, and who will provide this feedback to the CFEMM to document industry buy-in of an optimized retention strategy.

All trips made by the three vessels listed under the EFP will include 100% video review using CFEMM established and approved protocols (Appendix II) for verification of compliance. The fish identifiers will serve to link each fish to a specific location of capture, documented through the EM systems GPS. Fish catch locations will be linked with associated metadata (e.g. depth, bottom type), available in a Center database of extensive environmental, bathymetric, and physical data. Information obtained through this project will be collected and managed by CFEMM researchers with data and informational summaries provided to the eastern Gulf reef fish fishing industry and NOAA partners on a regular basis.

Literature Cited:

Burns, K. 2009. Evaluation of the efficacy of the minimum size rule in the red grouper and red snapper fisheries with respect to J and circle hook mortality and barotrauma and the consequences for survival and movement. University of South Florida, St. Petersburg, FL. Graduate Theses and Dissertations. https://digitalcommons.usf.edu/etd/1881

NOAA, 2009. Fisheries of the Caribbean, Gulf of Mexico, and South Atlantic; Reef Fish Fishery of the Gulf of Mexico. Amendment 30B; Final Rule. 74 Federal Register 72 (16 April 2009):17603-17611. https://gulfcouncil.org/wp-content/uploads/RF-Final-Amendment-30B-10_10_08_508Compliant.pdf

SEDAR, 2018. SEDAR 61 – Gulf of Mexico red grouper stock assessment report. SEDAR, North Charleston, SC. https://sedarweb.org/docs/sar/S61_Final_SAR.pdf

6. List of the specific regulations from which an exemption is being requested and why each exemption is required for the experiment to succeed:

a. Retention of undersized red grouper - 622.37(b)(2)(i)
To be able to track individual red grouper from a defined spatial area in order to assess the feasibility of refined spatial management to reduce discards in high-mortality areas.

b. Sale of undersized red grouper - 622.37(b)(2)(i)
To be able to assess issues with quota limitations, marketability, and economic value of undersized red grouper.

7. Catch information:

a. The species (target and incidental species must be clearly differentiated) expected to be harvested and/or discarded under the EFP.

Target: Red Grouper. Incidental species harvested during exempted fishing: NA. Incidental species discarded: NA

b. The number or weight, by species, of such harvest and/or discard anticipated to occur during the exempted fishing, regardless of whether or not it is retained for sale.

Maximum of 3,000lbs (gutted weight) of red grouper harvested collectively by participating vessels. The goal is "0" lbs of red grouper discarded by participating vessels in depths greater than 35 fathoms.

c. The expected disposition of all regulated species harvested under the EFP (e.g., what will be done with the fish once it is caught).

Sale by permitted Dealers in the IFQ program associated with the vessels participating in the EFP (*See* response in #8); in some cases this will be following sample acquisition by dockside samplers.

d. Any anticipated impacts on fisheries, marine mammals, endangered species, or Essential Fish Habitat.

There are no anticipated impacts to marine mammals or endangered species. The anticipated impact of this project to the fishery focuses on reducing bycatch of undersized red grouper in the form of both reductions to discards and discard mortality, by allowing 3,000lbs of undersized red grouper to be retained. Of those 3,000lbs, it is estimated that if they were released (using the accepted discard mortality rate (44.1% from SEDAR 61) 1,677lbs of red grouper would have survived post-release and 1,323lbs would have died post-release. Shifting to optimized retention would mean that 1,323lbs would be retained for sale rather than discarded and assumed dead. Therefore, this project's anticipated impact is a net removal of 1,677lbs undersized red grouper from the stock.

8. Anticipated effort information for each vessel:

Fixed gear:

a. Type and size of gear to be used.

Bottom longline gear with set lengths ranging between approximately 3 and 5 nautical miles.

b. Amount of gear to be used.

Dependent on time spent fishing within the spatial area where the EFP applies (>35 fathoms) until the project period ends or the 3,000lbs (gutted weight) limit of undersized red grouper harvest is reached.

c. Number of gear hauls.

A total of 300-400 hauls per year are expected to take place seaward of 35 fathoms. Of these (based on CFEMM historical data) approximately 243-284 hauls are expected to catch red grouper.

d. Average soak time.

3.5 hours (set start to haul end).

e. Sampling months/time of year.

1/1/2024 - 12/31/2024 (12 month period).

f. Sampling locations (including depth).

Eastern Gulf of Mexico seaward of the 35 fathom boundary.

9. Participating vessel information (and corresponding dealers):

- Vessel Name - Amy Lynn; USCG #644351; Home Port- Redington Shores, FL; Vessel Owner Information - Kenny Daniels - 10891 Oakdale Terrace, Seminole, FL 33772 - (727)-504-2102 fishguysgirl02@yahoo.com. Permit Information - Amy Lynn Inc, RR-411/RRLE-49. Captain Information: Kenny Daniels - (727)-504-2102. Dealer: Nachman's Native Seafood, 17811 Gulf Blvd, Redington Shores, FL 33708 - Tim Nachman (727) 397-3301.

- Vessel Name - Miss Paisley; USCG #961136; Home Port- Inglis, FL; Vessel Owner Information - Glen Brooks - PO Box 636, Lecanto, FL 34460 - (941)-920-7302 brooks3glen@yahoo.com. Permit Information - Fishing Vessel LJ Inc, RR-663/RRLE-8. Captain Information: Jesse Reed - (941)-462-5546. Dealer: Brooks Dockside Seafood, 140 Elkins Rd, Inglis, FL 34449 - Glen Brooks (941) 929-7302.

- Vessel Name - Liberty Belle; USCG #901219; Home Port- Cortez, FL; Vessel Owner Information - Karen Bell - 4600 124th St Ct W, Cortez, FL 34215 - (941)-704-7643 kljbell@gmail.com. Permit Information - Liberty Belle Inc, RR-559/RRLE-46. Captain Information: Greg Haring - (727)-758-8554. Dealer: A.P. Bell Fish Company, Inc, 4600 124th St Ct W, Cortez, FL 34215 - Karen Bell (941)-794-1249.

If a vessel change is necessary, the NOAA SERO Permit Office, NOAA and FWC Law Enforcement Offices, and the FWC Fishery-Dependent Sampling Program will be notified and provided the necessary information.

Signature of applicants:

Carole L. Neidig **Carole Neidig, Center Director**

Max Lee **Max Lee, Center Coordinator**

Appendix I

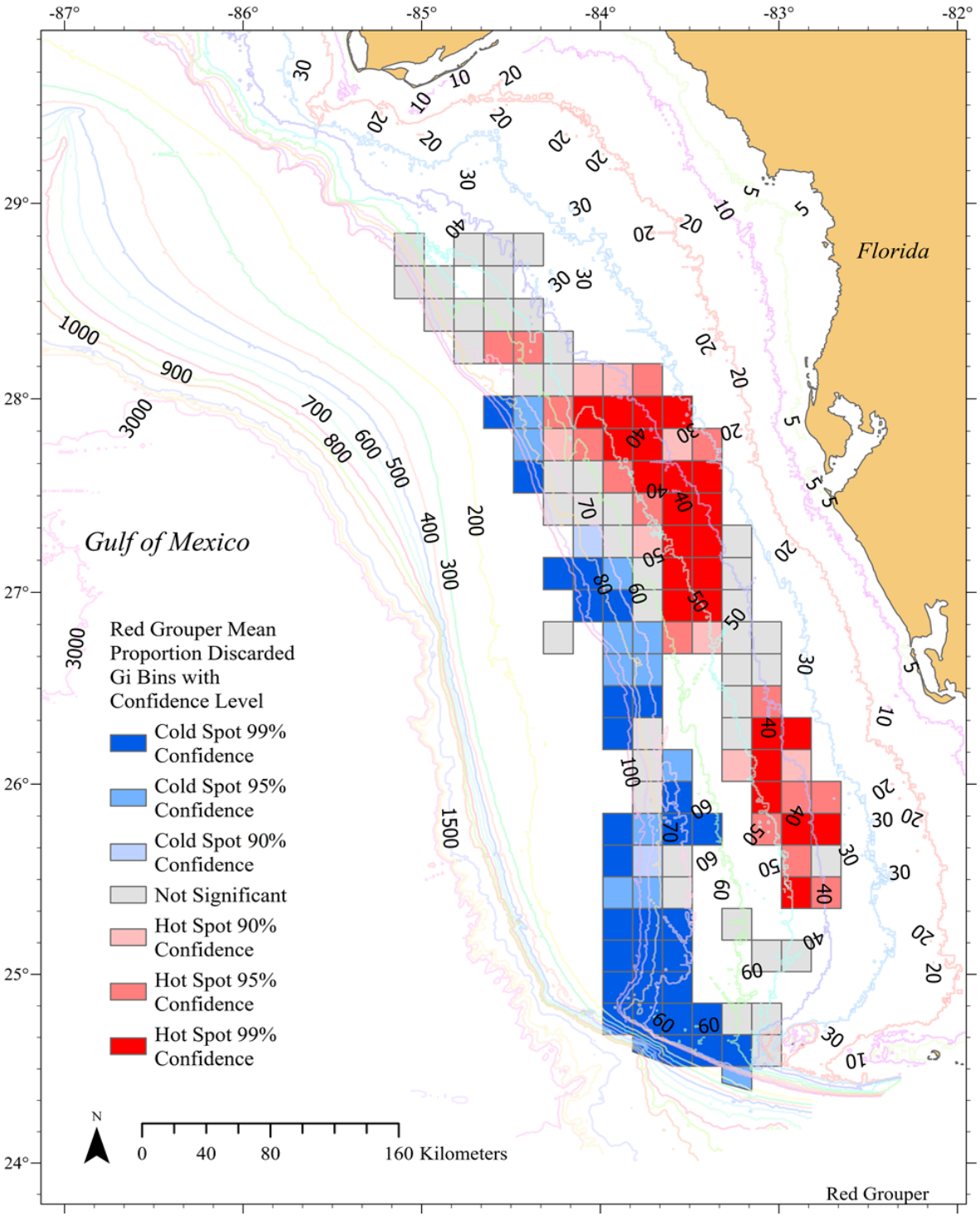

Figure 1. Red grouper discard hotspot analysis, eastern Gulf of Mexico (July 2016 - December 2021).

Appendix II

Center for Fisheries Electronic Monitoring at Mote (CFEMM)
Vessel Electronic Monitoring System Catch Data Processing and Data Entry Protocols

Individual fish catch characteristics, including handling, condition upon capture, and fate, will be keyed into a custom template from a series of drop-down menus. Selection options include (1) Handling: brought onboard, not handled (dropped off), cutoff at rail (no entanglement), cutoff at rail (entanglement), or unknown handling; (2) Condition: live healthy, live stomach and/or eyes protruding, live damaged, dead on arrival (damaged), dead on arrival (undamaged), or unknown condition; and (3) Fate: retained, retained as bait, discarded live healthy (vented), discarded live healthy (not vented), discarded live damaged (vented), discarded live damaged (not vented), discarded dead, discarded unknown, or unknown fate. Specific to shark bycatch, juvenile or adult status will be selected and an estimated size category of small (< 1m), medium (1 to 2m), or large (> 2m) will be assigned. If possible, sex will be recorded based on the presence or absence of claspers. Discarded catch from vessels equipped with stern mounted cameras for documentation of post-release status will have the following options for entry: swam down, floated off, eaten by marine mammal, eaten by shark, eaten by unknown predator, and unknown release fate.

A series of established quality control steps will be taken with the resulting species annotations prior to export into a Microsoft Access™ database, including confirmation of species identification, and accuracy of the assigned condition and fate. Catch annotations will be aggregated using an R statistical software program from which a report of >75 explicit error checks will be generated. Aggregated data will then be reviewed for missing information and inconsistencies and similarly, inconsistencies in the aggregated data (e.g. handling codes that did not align with fish fate) will be detailed in an automated report, providing the opportunity to resolve any problems prior to importing the dataset to the final database. Finalized data will then be spatially joined using R code to link metadata, including bathymetry information to enable depth estimation for catch events.