Request for an Exempted Fishing Permit for Management of the Recreational Red Snapper Fishery (Private-Boat Anglers, Federally Permitted Charter-for-Hire and Headboats) off Texas' Coast for 2018 and 2019

1. **The date of the application and research end date:** Application submitted on February 12, 2018. The EFP will be for 2-years and will end on December 31, 2019.

2. **The applicant's and/or project coordinator's name, mailing address, telephone number, e-mail, and fax number:**
Texas Parks and Wildlife Department
Robin Riechers
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Austin, TX 78744
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3. **A point of contact for application questions:**
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4. **A statement of the purposes and goals of the exempted fishery for which an EFP is needed, including justification for issuance of the EFP:**

The purpose of this EFP is to allow the Texas Parks and Wildlife Department (TPWD) to test data collection and quota monitoring methodologies during 2018 and 2019 that could potentially be used for the management of the recreational red snapper fishery in Texas.

Two data collection methods will be used side-by-side during the course of this 2-year study: TPWD's standard harvest monitoring data collection program and the self-reporting mobile and web application iSnapper. Although not mandatory during this initial testing phase, recreational anglers will be encouraged to report through the mobile application. iSnapper allows anglers to self-report red snapper landings and, in conjunction with red snapper intercepts from the TPWD creel survey, can potentially be used to create more timely landings estimates. This EFP would allow Texas to further test the feasibility of using this self-reporting electronic data capture application and calibrate it against our current harvest monitoring program for offshore species like red snapper.

Private anglers and federally permitted charter-for-hire vessels would be allowed to fish off Texas from the shore out to 200 nautical miles during the specified season(s). State-licensed charter boat captains would be allowed to participate in the pilot study and fish from shore out to 9 nautical miles, since they are not permitted to fish in federal waters.

Texas would also like to explore establishing a red snapper season that is more amenable to fishing conditions in the western Gulf of Mexico. Traditionally, the Federal season has opened on June 1 when high winds and rough seas are commonplace offshore of Texas, creating unsafe conditions for some and causing others to forego fishing during the short Federal season. Instead, Texas will open state waters on January 1st and explore setting the opening date for federal waters at a time in the year when sea conditions are more favorable to recreational fishing (sometime after June 1st) and keep Federal and state waters open longer to prevent a short "derby" fishery from developing. TPWD would work through the TPW Commission to set appropriate season lengths (opening and closing dates) for both state and federal waters and monitor catches to ensure that we stay within the annual catch limit. Any proposed changes would go through appropriate Texas rulemaking procedures.

5. **List regulations for which the EFP is needed:**

   a. Federal red snapper season
   b. Current sector separation management rules

6. **The species (target and incidental) expected to be harvested under the EFP, the amount(s) of such harvest necessary to conduct the exempted fishing, the arrangements for disposition of all regulated species harvested under the EFP, and any anticipated impacts on the environment, including impacts on fisheries, marine mammals, threatened or endangered species, and EFH:**

   a. The target species expected to be harvested under this EFP is red snapper. All red snapper are to be harvested according to current state (TPWD) and federal (GMFMC) regulations. Harvest is expected to be at, or below, 16% of the total recreational Gulf-wide annual catch limit (Texas' preferred allocation of the Gulf-wide annual catch limit as found in Table 2.6.2, Alternative 2, of the Draft Environmental Impact Statement for Amendment 39, 2015). This is the selected amount for this EFP, but does not constitute acceptance of this percentage for any amendment that would create state management. Based on the 2017 Gulf-wide red snapper ACL of 6,733,000 lbs whole weight, Texas' portion of the ACL for both 2018 and 2019 would be 1,077,280 lbs. whole weight (Table 1).

Table 1. Projected landings for 2018 and 2019 by sector.

Mode	Pounds Caught in 2016	% of Total Landings	2018-2019 Projected Landings (lbs)
Private Rec.	111,986	22.4%	241,245
Charter-for-hire	49,580	9.9%	106,807
Headboat	338,508	67.7%	729,228
Total	500,074		1,077,280

b. Other reef fish species expected to be caught incidentally by anglers participating in the pilot study covered by this EFP include: Atlantic spadefish, gag, gray snapper, gray triggerfish, greater amberjack, lane snapper, and vermilion snapper. Direct harvest of these species is not covered by this EFP. Participating anglers will be required to release any incidental catch not allowed by current fishing seasons, size, and bag limits established by state (TPWD) and federal regulations. Anglers participating in the pilot study covered by this EFP will be encouraged to use a descending device or venting tool when releasing red snapper and other reef fish to minimize the likelihood of post-release mortality. We will encourage the use of these tools through social media outlets and face-to-face interaction with anglers at creel survey sites.

c. No significant impact on regulated species covered under this EFP is expected.

d. Direct and indirect environmental impacts from fishing activities permitted under the proposed EFP mostly relate to the direct impacts of fishing on red snapper. Removal of fish from the population through fishing mortality reduces the overall population size. This would include the number of discards, sublegal fish or fish caught and then released, and the mortality associated with releasing these fish. The reef fish fishery can also affect species outside the reef fish complex. However, for sea turtles and other listed species, the most recent biological/ecological opinion for the Reef Fish Fishery Management Plan concluded authorization of the Gulf reef fish fishery managed in the reef fish plan is not likely to jeopardize the continued existence of sea turtles, smalltooth sawfish, or *Acropora* species (NMFS 2011a). In addition, the primary gear used by the recreational sector (hook-and-line) was classified in the 2014 List of Fisheries (79 FR 14418, April 14, 2014) as a Category III fishery with regard to marine mammal species, indicating this gear has little effect on these populations. The most likely indirect effect on the red snapper stock from this action would be from discard mortality; however, increased use of descending devices and venting tools is expected to increase survival of released fish. No other environmental impact is expected under the proposed EFP.

7. Anticipated effort:

Recreational harvest of red snapper in Texas is predominately by hook and line (≈99%). The EFP will cover all sectors of the recreational red snapper fishery (private-boat anglers, charter-for-hire, and headboats). Fishing under this EFP would take place during the summer and fall months of 2018 assuming approval in the spring of 2018. In 2019, TPWD may suggest a different federal season off of Texas out to 200 nm.

8. **Information on vessels fishing under the EFP:**

All Texas licensed saltwater anglers, federally permitted charter-for-hire vessels, and federally permitted headboats are covered under this EFP. TPWD currently provides NMFS with an angler registry list which includes all potential license holders. Non-federally permitted charter boats will still be able to fish in state waters, but cannot fish in federal waters and are not part of this EFP.

9. **Principle Investigator:** Dr. Mark Fisher (CV attached as Appendix A).

10. **Catch monitoring:**

Private-boat landings will be estimated by the Texas Marine Sport Harvest Monitoring Program (Attachment A), which has been in use since 1974. Similarly, charter-for-hire landings will also be estimated by the Texas Marine Sport Harvest Monitoring Program. Headboat landings will be obtained from NOAA 's Southeast Region Headboat Survey, which has been utilized in the Gulf of Mexico since 1986.

Private-boat landings will be monitored weekly. Seasonal landings of red snapper are routinely calculated twice per year by TPWD, but these estimates are not timely enough for this EFP. Instead, private-boat red snapper intercepts from the coastwide TPWD creel survey will be sent after each survey-day to the TPWD Rockport Marine Lab, from this data we will be generating an estimate of the aggregate number of fish intercepted. We sample 834 survey-days during our high-use season (May 15 – November 20). While there isn't a fixed number of samples conducted per week, with n=834 there are surveys occurring just about every day during the season.

As there is a strong relationship between the number of red snapper intercepted and the total private-boat landings estimated (Appendix B, Figure 1), landings (in numbers) will be projected based on the number observed to date, and poundage will be calculated from a length-weight relationship.

Additionally, self-reported harvest data using iSnapper v2.0 will be incorporated into the catch monitoring effort. The iSnapper v2.0 app was specifically developed for use by private recreational anglers but is also applicable for use by the for-hire sector (Attachment B). Self-reported data submitted through iSnapper will be validated through the Texas Marine Sport Harvest Monitoring Program and using a capture-recapture design and will provide an additional input for monitoring red snapper harvest. This data will provide an independent estimator of coast-wide landings and will be compared to TPWD's estimated landings for validation.

Data collected via iSnapper includes:

- Date and time of trip
- Vessel registration number or name

- Federal and/or State permit number(s)
- Marina/boat ramp where trip began
- Number of anglers
- Hail out
- Species and number retained and released
- General location where fish where caught along with the primary depth fished for the trip (red snapper only)
- Socioeconomic data

Charter-for-hire landings will also be monitored weekly. Charter-for-hire red snapper intercepts from the coastwide TPWD creel survey will be sent after each survey-day to the TPWD Rockport Marine Lab, where a running tally of the number caught and individual lengths will be kept. As there is a strong relationship between the number of red snapper intercepted and the total charter-for-hire landings estimated (Appendix B, Figure 2), landings (in numbers) will be projected based on the number observed to date, and poundage will be calculated from a length-weight relationship.

Texas headboat landings will be obtained weekly from the NOAA Headboat Survey. As this survey is census-based, no statistical relationship is necessary, and landings will be kept as a running tally.

All red snapper landed in Texas will be counted against Texas' quota and the fishery in both state and federal waters will be closed when the combined estimated recreational landings are projected to meet the quota (1,077,280 lbs. whole weight). Final landings estimates will be calculated after the end of the season, and these will be the estimates used to determine total landings. If there are overages, landings would be analyzed and if needed, the appropriate adjustments to the following year's season would be made. This could be accomplished in several ways, including but not limited to; reduction in state bag limits, number of federal days, and changes in season timings.

Federal and state bag and size limits will remain as they were in 2017 (unless our commission adopts new bag or size limits for red snapper) and will be enforced by TPWD law enforcement officers under the Federal/State Joint Enforcement Agreement. Enforcement will be by a combination of at sea and dockside intercepts.

11. **Signature of Applicant:** Robin Riechers by ML 2/12/18

Robin Riechers
TPWD Coastal Fisheries Division Director

Appendix A.

Mark R. Fisher, Ph.D.
Science Director, Coastal Fisheries Division
Texas Parks and Wildlife Department
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EDUCATION

1993. Ph.D., Wildlife & Fisheries Sciences, Texas A&M University.
Coursework included population dynamics, fisheries economics, fisheries management, human dimensions in wildlife and fisheries management, natural resource economics, and 36 semester hours of statistics.

1984. M.S., Biology, University of Louisiana-Lafayette.
Major coursework included environmental physiology, biochemical adaptations to the environment, microbial physiology, scanning and transmission electron microscopy.

1982. B.S., Marine Biology, Texas A&M University.
Curriculum included 33 semester hours of chemistry and 60 hours of marine biology.

EXPERIENCE

12/02-present. Science Director, Coastal Fisheries Division, Texas Parks and Wildlife Department, Rockport. Provides direction for research and program development. Responsible for conducting data analyses related to stock assessments and scientific justification for management recommendations. Supervises professional staff that assists with program quality control, data analyses, and program development. Serves as editor for Division reports and publications.

11/92-11/02. Fishery analyst, Coastal Fisheries Division, Texas Parks and Wildlife Department, Austin. Provides statistical and scientific support for the Coastal Fisheries Division. Duties include stock assessments, spatial analysis of marine organisms, statistical analysis of the coastal fisheries database, and statistical consulting with staff on the design and analysis of special projects.

SELECTED PUBLICATIONS

Matich, P., J. Mohan, J. Plumlee, T. Tinhan, D. Wells and M. Fisher. 2017. Factors shaping the co-occurrence of two juvenile shark species along the Texas Gulf Coast. Marine Biology 164:141-157.

Carson, E., B. Bumguardner, M. Fisher, E. Saillant and J. Gold. 2014. Spatial and Temporal Variation in Recovery of Hatchery-Released Red Drum (*Sciaenops ocellatus*) in Texas Bays and Estuaries. Fisheries Research 151: 191-198.

Brown, H., T.J. Minello, G.A. Matthews, M. Fisher, E.J. Anderson, R. Riedel, and D.L. Leffler. 2013. Nekton from fishery-independent trawl samples in estuaries of the U.S. Gulf of Mexico: a

Comparative Assessment of Gulf Estuarine Systems (CAGES). U.S. Department of Commerce, NOAA Technical Memorandum NMFS-SEFSC-647, 269 p.

McDonald, D., B. Bumguardner and M. Fisher. 2010. Winterkill simulation on three size classes of spotted seatrout. Texas Parks and Wildlife Department, Coastal Fisheries Division, Management Data Series Number 259. Austin.

Tolan, J. M. and M. Fisher. 2009. Biological response to changes in climate patterns: population increases in gray snapper (*Lutjanus griseus*) in Texas bays and estuaries. Fishery Bulletin 107:36-44.

Fisher, M. R. 2007. Fishery-independent catch of small coastal sharks in Texas bays, 1975-2006. SEDAR 13-DW-18 Small Coastal Sharks Data Workshop, Panama City FL.

Pope, K. L., D. R. Blankinship, M. Fisher and R. Patino. 2006. Status of the common snook (*Centropomis undecimalis*) in Texas. Texas Journal of Science 58(4):325-332.

Porch, C. E., M. Fisher and L. McEachron. 2002. Estimating abundance from gillnet samples with applications to red drum (*Sciaenops ocellatus*) in Texas bays. Canadian Journal of Fisheries and Aquatic Sciences 59(4):657-668.

Fisher, M. R. 1999. Effect of temperature and salinity on size at maturity of female blue crabs. Transactions of the American Fisheries Society 128:499-506.

Lyons, D. D. and M. R. Fisher. 1998. Temperature and pH-related mortality of red drum (*Sciaenops ocellatus*) larvae stocked into fertilized culture ponds. Progressive Fish Culturist 60:227-230.

Fisher, M. R. 1997. Segmentation of the angler population by catch preference, participation, and experience: a management-oriented application of recreation specialization. North American Journal of Fisheries Management 17(1) 1-10.

Fisher, M. R. 1996. Estimating the effect of nonresponse bias on angler surveys. Transactions of the American Fisheries Society 125:118-126.

Fisher, M. R. and R. B. Ditton. 1994. A social and economic characterization of the U.S. Gulf of Mexico recreational shark fishery. Marine Fisheries Review 55(3) 21-27.

Fisher, M. R. and R. B. Ditton. 1992. Characteristics of U.S. tournament billfish anglers in the Atlantic Ocean. Marine Fisheries Review 54(1):1-6.

Fisher, M. R and S. C. Hand. 1984. Chemoautotrophic symbionts in the bivalve *Lucina floridana* from seagrass beds. Biological Bulletin 167:445-459.

Appendix B.

Figure 1. Relationship between the number of red snapper observed from private boats intercepted by the TPWD creel survey and the landings estimates, by year, season and area, 2015-2017.

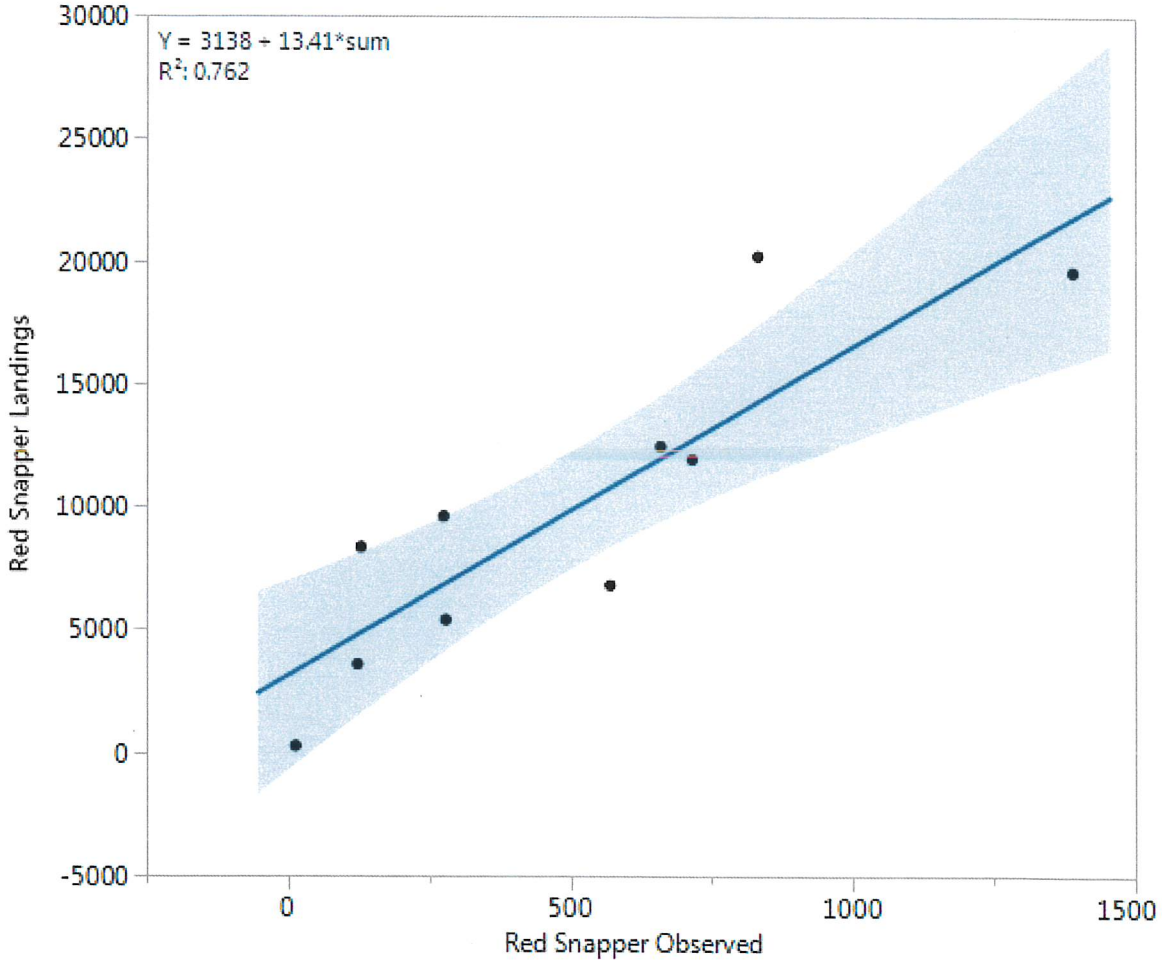
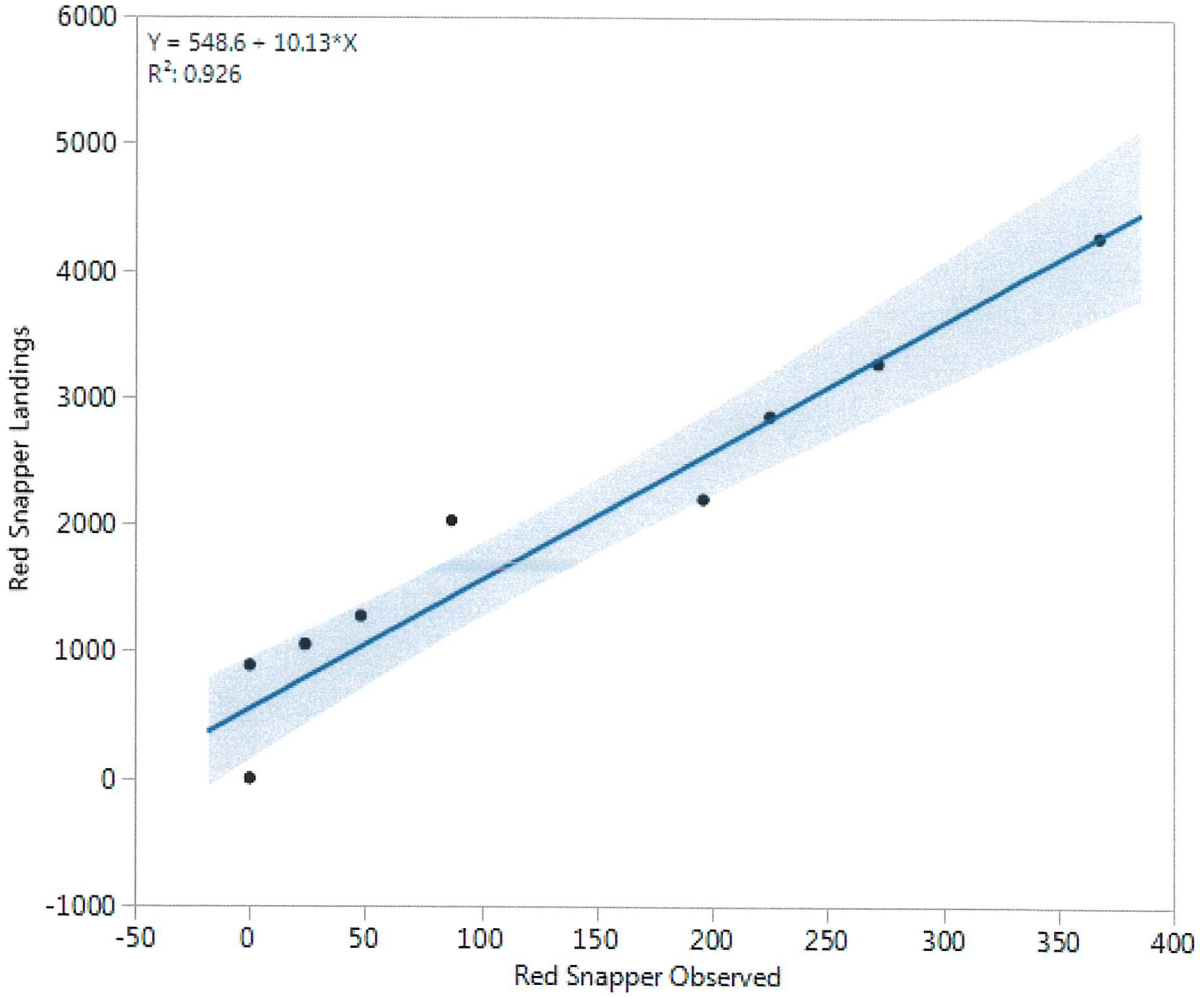
Figure 2. Relationship between the number of red snapper observed from charter-for-hire boats intercepted by the TPWD creel survey and the landings estimates, by year, season and area, 2015-2017.