

Recreational Angler Electronic Census Reporting of Red Snapper Catch Data in Alabama

FY 2015 Proposal

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1. Overview

1.1. Sponsor

Gregg Bray, Gulf States Marine Fisheries Commission

1.2. Focus Group

Survey Design and Evaluation

1.3. Background

In 2014, the Alabama Department of Conservation and Natural Resources/Marine Resources Division initiated a mandatory reporting program for private recreational anglers who landed red snapper *Lutjanus campechanus* in Alabama. This reporting program will be continued for the 2015 red snapper season; however, more emphasis will be placed on collecting at-sea validations of red snapper trips in order to capture a greater number of angler trips originating from private access sites. Anglers will report data via telephone and internet reporting platforms developed for this program and this data coupled with validation data collected by DCNR/MRD staff of red snapper trips is expected to produce more timely information compared to traditional survey methodologies which should help management of this important species. In addition to the mandatory reporting program, DCNR/MRD staff will attempt to estimate the number of private recreational trips by access type (private or public) similar to the methodology described in Sauls et al (2014) and develop estimates of public access red snapper effort using existing remote monitoring technology. The ratio of private access trips and public access trips determined from on-the-water validations will be used to expand the number of trips estimated from the remote monitoring survey and compare to estimates from the mandatory reporting program and MRIP.

1.4. Project Description

This proposal requests MRIP funds to; 1) maintain a mandatory reporting system for reporting recreational red snapper landings by Alabama private recreational vessels and validate vessel trips with red snapper to calculate a non-reporting rate for adjusting reported landings, 2) determine the relative rates of recreational red snapper anglers using public or private access sites and generate estimates of overall effort for these two groups and 3) investigate the use of remote monitoring technology at major public access sites utilized by Alabama recreational red snapper anglers to generate estimates of red snapper harvest for this group of anglers and determine how much influence weather has on daily participation rates.

1.5. Public Description

1.6. Objectives

1. Refine the reporting app, the online reporting system, and the IVR telephone hotline for private recreational angler reporting. 2. Refine field validation protocols and procedures to determine appropriate under- and over-reporting adjustment factors. Perform remote monitoring vessel count surveys to determine number of directed estimate of public access red snapper trips and conduct on-the-water validations to determine ratio of private access and public access effort. 3. Improve computing and data processing methods which minimize time needed to generate timely adjusted landings totals. 4. Evaluate the potential of the entire reporting system to be used as an in-season quota monitoring tool. 5. Calculate estimates of angler trips with red snapper by access type using alternative methods which can be used to compare to results of the mandatory reporting program data and the MRIP estimate.

1.7. References

Sauls, B., R. Cody, B. Cermak, O. Ayala, and K. Kowal. 2014. South Atlantic Red Snapper (*Lutjanus campechanus*) Monitoring in Florida for the 2013 season. Final Report. National Marine Fisheries Service, Southeast Regional Office, Saint Petersburg, FL. 43 p.

2. Methodology

2.1. Methodology

Mandatory reporting program and data validation DCNR/ MRD will continue the mandatory red snapper reporting program for private recreational anglers implemented in 2014. A robust validation component will be maintained consisting of at-sea and shored-based assignments. Trip validations will help to determine the rate of non-reporting which will be used to adjust reported trip information. Based on preliminary results and analysis of data from the 2014 reporting program along with feedback from field staff and the public, additional data will be collected from private anglers. As was required during the 2014 reporting program captains of vessels landing red snapper will be required to report vessel's registration, number of anglers, and number of red snapper harvested, dead red snapper discards, and county of landing. However, an additional question regarding whether or not the vessel is landing the fish at a private or public access site will be incorporated. Determination of relative rates of angler effort by access type Upon review of the 2014 reporting program data several questions were raised about whether or not calculated non-reporting rates accurately captured the level of non-reported trips. Vessel validations were primarily collected at public boat launches with a smaller proportion of validations collected at-sea. To address these concerns and determine rates of

red snapper trips departing private and public access sites ADCNR/MRD will attempt to count vessels leaving and returning to main ingress/egress points along Alabama's coast during daylight hours. Sampling protocols will be similar to those outlined in Sauls et. al. (2014). Samplers will be positioned at these locations in order to count vessels entering and returning from the Gulf of Mexico during daylight hours. DCNR/MRD enforcement staff will conduct at-sea intercepts of returning vessels at these locations on randomly selected day and time blocks. Enforcement staff will ask questions of returning vessel occupants to determine whether or not the vessel was engaged in fishing activities and if red snapper was harvested. If red snapper are on board enforcement staff will collect validation data as described above and determine type of access site vessel will end trip. Data from the vessel count survey and at-sea intercept survey will be used to generate estimates of the number of red snapper trips (vessel and angler) by access type. No other data exists which characterizes Alabama's red snapper harvest by type of access. Alternative angler count methodology The DCNR/MRD has previously installed a network of cameras at most of the coastal boat launches used by anglers to access areas of the Gulf of Mexico where red snapper occur. Video data collected during the 2014 red snapper season was stored and used to estimate daily red snapper angler trips for each ramp. Estimates of red snapper fishing effort and harvest were calculated using the video data. These preliminary estimates compared favorably to the red snapper reported through the mandatory reporting program. Use of the video camera system to generate estimates of public access is proposed for this project. A university researcher will be hired to count anglers as per protocols used for 2014 video count estimation.

2.2. Region

Gulf of Mexico

2.3. Geographic Coverage

Alabama

2.4. Temporal Coverage

Designated red snapper seasons (state and federal) - estimated to be May-July 2015.

2.5. Frequency

Trip-level reporting can be expected.

2.6. Unit of Analysis

Angler trip.

2.7. Collection Mode

Electronic data collection; apps and automated telephone recording software and paper tickets.

3. Communication

3.1. Internal Communication

Key DCNR/MRD staff will have bi-monthly meetings to evaluate project status, identify issues remaining for project implementation, and delegate work as appropriate. Coordination activities outside scheduled meetings will be made primarily via phone and email.

3.2. External Communication

DCNR/MRD project managers will communicate with the Gulf States Marine Fisheries Commission (Gregg Bray) as needed. In advance of the 2015 red snapper fishing season, outreach will be conducted with charter boat owner/operators through local print media, radio, meetings, emails and the DCNR website. Project status reports will be provided monthly through MRIP Data Management System (MDMS) and a detailed final report will be submitted upon project completion.

4. Assumptions/Constraints

4.1. New Data Collection

N

4.2. Is funding needed for this project?

Y

4.3. Funding Vehicle

Gulf States Marine Fisheries Commission subaward.

4.4. Data Resources

N/A

4.5. Other Resources

N/A

4.6. Regulations

Federal - none. State - Under DCNR regulation 220-3-.83 – “Recreational Reporting of Red Snapper”, the captain of each vessel is required to report red snapper landings prior to landing for each trip made. One report per vessel is required.

4.7. Other

Assumptions include successful hiring of required additional field samplers and for-hire fishing season length similar to recent fishing seasons (significantly longer season could require additional funding to support minimum level of validations and additional sampler time associated with access survey).

5. Final Deliverables**5.1. Additional Reports**

N/A

5.2. New Data Set(s)

Landings data, validation data, estimates of red snapper effort by access type.

5.3. New System(s)

N/A

6. Project Leadership**6.1. Project Leader and Members**

First Name	Last Name	Title	Role	Organization	Email	Phone 1	Phone 2
Kevin	Anson	Chief Biologist	Team Leader	AL DCNR/Marine Resources Division	kevin.anson@dcnr.alabama.gov	251.968.9694	
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Scott	Bannon	Chief Enforcement Officer	Team Member	AL DCNR/Marine Resources Division	scott.bannon@dcnr.alabama.gov	251.861.2882	
Julie	Perry	Chief -IT Section	Team Member	AL DCNR/Marine Resources Division	jluie.perry@dcnr.alabama.gov	334.353.5510	

7. Project Estimates**7.1. Project Schedule**

Task #	Schedule Description	Prerequisite	Schedule Start Date	Schedule Finish Date	Milestone
1	Planning		02/01/2015	03/15/2015	
2	Outreach		03/15/2015	06/30/2015	
3	Contractual services agreement with local university to provide remote monitoring effort estimation.		03/01/2015	04/30/2015	
4	Modify smartphone app, internet, and telephone platforms.	1	03/01/2015	04/30/2015	Y
5	Refine field validation and effort survey procedures.		04/01/2015	05/15/2015	
6	Collect reported data, enter validation data, and conduct QA/QC procedures.	2, 4	06/01/2015	06/30/2015	
7	Determine landings estimates from angler reports and adjustment factors.	6	06/01/2015	07/31/2015	
8	Receive final report of public access angler trip estimates from public remote monitoring network.	3	09/01/2015	09/30/2015	
9	Develop final report.	7, 8	08/15/2015	11/30/2015	

7.2. Cost Estimates

Cost Name	Cost Description	Cost Amount	Date Needed
DCNR/MRD Indirect Cost Rate	Dept. of Interior approved ICR of 17% (not applied to contractual services)	\$7250.00	12/01/2014
Planning activities	DCNR-IT and DCNR/MRD staff time	\$4000.00	05/31/2015
Outreach and data collection services and materials	DCNR/MRD staff time and materials	\$4500.00	05/31/2015

Cost Name	Cost Description	Cost Amount	Date Needed
Cooperative Agreement Oversight	GSMFC Cooperative Agreement management/oversight	\$2500.00	05/31/2014
Access survey and validation	Access survey and validation procedures development/training, data collection, QA/QC, data analysis.	\$28857.00	08/31/2015
Contractual services	Contract with university researcher to conduct angler effort counts for remote monitoring survey	\$14893.00	04/30/2015
TOTAL COST		\$62000.00	

8. Risk

8.1. Project Risk

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach
Requirement to report red snapper before landing will not reach the public.	Public awareness could be low and all trips will not be reported resulting in lower estimates.	High	Various types of media will be used to publicize the mandatory program. Enforcement officers will issue citations for non-compliance.
Development of improvements to smartphone app, database and IVR telephone module will not occur in time for season.	New data will not be collected which could help to evaluate effectiveness and compliance of reporting program.	Low	DCNR/MRD staff will engage DCNR-IT staff and IVR contractor to develop modified version of data collection system.
Low reporting rates.	Statistical confidence of data will be reduced.	Medium	Anglers who do not report as required will receive a citation. Significant outreach will be conducted before and during the fishing season to encourage compliance.
Lack of field samplers for validation of red snapper trips and reporting compliance.	Low numbers of validations could impact estimates and corresponding confidence intervals.	Low	DCNR/MRD will hire additional staff to ensure a robust validation program is maintained throughout the fishing season.

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach
Validation of vessel trips with red snapper by DCNR/MRD staff will bias reporting rates. Reporting rates may be higher for validated vessels compare to those vessels which were not validated.	Inaccurate correction factors determined by comparing biased validated trip data to reported data could cause final estimates to be significantly less than actual number of trips.	High	DCNR/MRD staff will contact MRIP survey consultants in advance of the red snapper season to determine; 1) feasible validation techniques to incorporate into the validation survey protocols, and 2) estimation procedures which could eliminate or reduce bias. Estimates of final harvest using correction factors derived from defined time intervals between time of validation and time of report will be included in the final report. Calculation of multiple correction factors using this approach might help to describe level of reporting bias due to validation encounter.

9. Supporting Documents