

ABBREVIATED NOAA ENVIRONMENTAL COMPLIANCE QUESTIONNAIRE

Instructions. Answer EVERY question in the yellow square below it.
 Questions are selected from the full 53-question NOAA Environmental Compliance Questionnaire available at www.nepa.noaa.gov/questionnaire.pdf; as such questions are not in numerical order

Grant number and/or Project ID (if available)
NA16OARXXXXXX
Project Title
Estimating the Absolute Abundance of Red Snapper in the U.S. Gulf of Mexico
Name and contact information for the person completing this form
Name Address Phone Number Email Address
State Sea Grant Program
XX Sea Grant Consortium
<p>1. Describe the proposed activity, including:</p> <ul style="list-style-type: none"> - its purpose, objectives, and goals; -- sampling, collection, or observation procedures; - any proposed mitigation or monitoring measures; - a description of the proposed impact area, if the proposed activity involves construction, restoration, dredging, excavation, and/or fill; - a description of the equipment or structures (e.g. scientific monitoring equipment, deployment platforms, etc.) that would need to be temporarily or permanently placed in the environment.
<p>This research initiative addresses one of the most pressing issues currently facing U.S. Gulf of Mexico (Gulf) fisheries management – estimating the absolute abundance of Red Snapper (<i>Lutjanus campechanus</i>). The iconic Red Snapper supports one of the most economically valuable finfish fisheries in the Gulf. Their immense popularity led to severe stock depletion through historical overfishing, and the stock remains overfished. Best possible management is hindered by the lack of robust abundance data. Thus, our overarching goal is to provide an independent estimate of Age-2 and older Red Snapper absolute abundance in the northern Gulf of Mexico. We will meet this goal by addressing the following objectives:</p> <ol style="list-style-type: none"> 1. To estimate abundance and distribution of Red Snapper on artificial, natural, and unknown/unconsolidated bottom habitat across the northern Gulf; 2. To develop, optimize, and implement a large-scale survey design that can be used not only for the Red Snapper population estimation but also benefit future Gulf-wide population surveys; 3. To ensure the design will result in estimates that will be used for comparison an integration into the NOAA Red Snapper stock assessment; 4. To archive biological samples for future life history studies of age and growth, fecundity and trophic ecology, and genetic population structure; 5. To work directly with the Gulf fishing community and engage stakeholders. <p>We propose to use a suite of methodologies in a multi-regional approach that is appropriate for the regions and habitats sampled, as a single sampling method is not capable of providing abundance estimates in all habitats. We will perform direct visual counts of Red Snapper across the entire region and various habitats using remotely operated vehicle surveys and towed camera arrays, coupled with active and passive acoustics for calculating fish densities and validating counts from visual surveys. Bolstering these visual approaches, well-established depletion-based methodologies will be used to provide an additional but comparable estimate of abundance. These techniques have proven successful through proof-of-concept work in the Gulf, especially for shallow areas constrained by visibility limitations. Finally,</p>

we will employ a tagging study using mark-and-recapture techniques coupled with high-reward tagging to provide an additional estimate of abundance. Each region has specific habitat features and nuances that require this multi-faceted approach. Additionally, with proper calibration, this multilayered approach provides a means to validate any particular sampling methodology. Our group strongly believes that combining habitat-specific estimates from these distinct but reliable methodologies will provide the most robust absolute abundance estimate for Red Snapper in the Gulf.

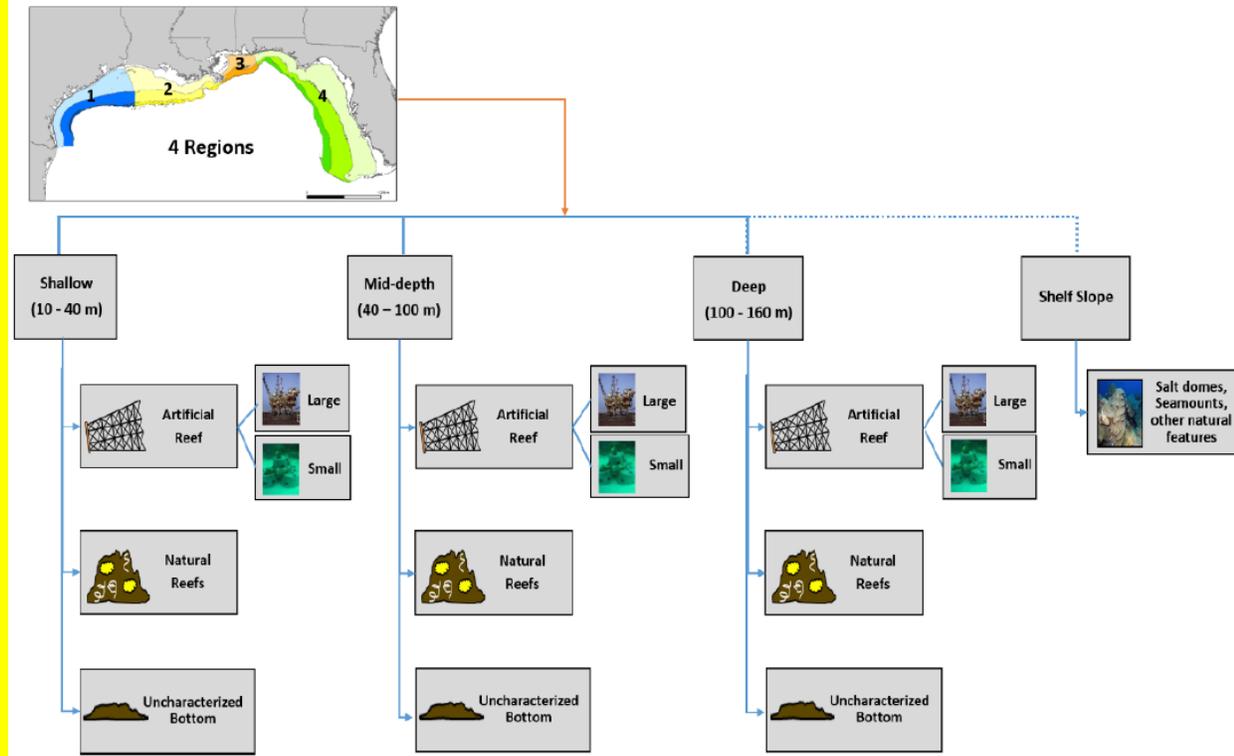


Figure 1. Schematic flow chart representation of the stratified random design. Each of the 4 regions across the Gulf is broken down into 3 depth strata (shallow, mid-depth, deep). Habitat types are broken down into artificial reef (large and small), natural banks, and unknown/uncharacterized bottom for each depth strata.

2. List the species of plants and animals that are the subjects of the proposed activity, and describe the numbers (by species, age, sex, stock, location, etc.) to be targeted. Specify which non-native species could be introduced incidentally and how.

Red Snapper are the principal targeted species of this research effort. As the goal of this project is to determine the abundance and distribution of Red Snapper (by age, sex, stock, location, etc.) throughout the Gulf of Mexico using a random stratified sampling design, the exact numbers of Red Snapper to be targeted are not known, as determining numbers and abundance over various habitat types is a major goal of the study. Fish that are retained will be used to provide habitat- and region-specific estimates of age structure (as requested in RFP); thus, this is a major unknown and the primary reason driving the need for the study; thus, we do not have exact numbers at this point.

3. List species that would be transplanted or introduced at the site or in its immediate vicinity, and specify whether any would be non-native. Specify which non-native species could be introduced incidentally and how.

None. There are no plans to transplant or introduce any species during this project. There is a no probability of incidentally introducing a non-native species, as we will be sampling native species.

4. List hazardous substances (as defined by 29 CFR 1910.120(a)(3)) that may be released into the environment or used during the proposed activity.

There are no plans to release hazardous substances into the environment.

Mock-Up Abbreviated Environmental Compliance Questionnaire for Example ONLY

5. List hazardous wastes (as defined by 40 CFR 261.3) that may be generated during the proposed activity.
We do not foresee any hazardous wastes being generated during the proposed research.
6. List unique or unknown risks to human health or the environment from the proposed activity.
There are no unique or unknown risks to human health or the environment from this project. Standard routine fisheries sampling approaches will be conducted in offshore waters of the Gulf of Mexico from research vessels. We have well-established mechanisms in place to reduce risks to human health and the environment.
7. List any individuals, groups, or organizations that may disapprove of or oppose the proposed activity, and describe the circumstances of their disapproval or opposition.
None. Having a known estimate of Red Snapper is key to managing this species. Those constituents realize there is a major information gap regarding the population. Thus, there is strong support from a variety of group for this project, as everyone agrees a better assessment of population abundance is needed.
8. If the proposed activity is a continuation of an ongoing project, describe any changes to the proposed activity since it was initiated, including progress toward achieving its objectives/goals.
N/A. The proposed research is not a continuation of an ongoing project.
10. Describe the proposed activity's location, including geographic coordinates, river mile markers, etc. and indicate whether it includes unique geographic areas of notable recreational, ecological, scientific, cultural, historical, scenic, or aesthetic importance (Examples include, but are not limited to: coral reefs; marine protected areas; national marine sanctuaries; essential fish habitat; habitat area of particular concern; critical habitat designated under the Endangered Species Act; park or refuge lands; wild or scenic rivers; wetlands; prime or unique farmland; sites listed on the National Register of Natural Landmarks; sites listed or eligible for the National Register of Historic Places; sites that are ecologically significant or critical areas including areas that are normally inundated by water or areas within the 100-year floodplain).
The proposed research will occur over the US Gulf of Mexico Shelf from waters 10-150 m in depth. There are several unique geographic areas that are encompassed within the study area that harbor populations of Red Snapper. These do include the Flower Garden Banks National Marine Sanctuary, Florida Keys National Marine Sanctuary, and several Habitat Areas of Particular Concern (HAPC) including many of the northwestern Gulf natural banks and natural reefs off Florida including the Madison-Swanson Marine Reserve, Florida Middle Grounds, and Pulley Ridge. If these sites are randomly selected for sampling, required permits/letters of acknowledgement will be obtained prior to sampling. Our research team routinely works under a variety of both federal permits, letters of authorization, and similar approval required documentation. Our team typically has active sampling permits to work in these areas. If modifications or extension are needed, we work closely with the managing groups that will facilitate permission to sample these areas. Since this is a Gulf-wide study, we would obtain this specific permission as to not bias the study by excluding these areas that almost certainly hold large populations of Red Snapper. However, our team is very experienced at sampling and avoiding impacts to sensitive habitats/species in these areas.
11. Would the proposed activity degrade or disturb previously undisturbed areas?
The sampling methods that will be used are vertical line sampling, visual survey from ROV or towed camera platforms, mark-recapture tagging, and active and passive acoustics. These methods are noninvasive and highly unlikely to degrade or disturb previously undisturbed areas. Moreover, active fishing occurs in the majority of areas we will be sampling. However, should sites be randomly selected in sanctuaries or HAPCs (see above). We will follow well-establish protocols and permitting to avoid any disturbance.
13. If there are previous or ongoing uses of the proposed activity's site, or other issues, that make it likely that contaminants may be uncovered and/or disturbed by the proposed activity, describe the previous or ongoing uses or other issues of the site, potential contaminant, and the circumstances that may uncover and/or disturb the contaminants.
N/A.

17. List all other interested or affected Federal, state, and local agencies; Tribal governments, nongovernmental organizations; minority or economically disadvantaged communities; and individuals. Describe listed entities involvement, activity, or oversight regarding the proposed activity.

The Louisiana Department of Fish and Wildlife has one co-PI on the project. They will be responsible for a sub-portion of the field sampling effort off Louisiana. NOAA Fisheries has three non-compensated collaborators participating on the project.

18. List all federal, state, or local permits, authorizations, waivers, determinations, or ongoing consultations that would be required for the proposed activity to comply with all applicable environmental laws and regulations. Provide the date the permit, authorization, waiver, or determination was obtained or would be obtained.

Scientific sampling permits will be obtained by each principal investigator from their respective state fish and wildlife departments or other appropriate granting agency. Federal letters of authorization for sampling Red Snapper will be obtained from NOAA before the commencement of this project on October 1, 2017. Since the project has yet to be awarded, we do not have applied for the appropriate paperwork. Nevertheless, the research team routinely works under this documentation for other projects, and the team is very experienced in what type of documentation is required and how to secure these documents. Also, see numbers 10 and 11 above for more details.

35. Is the target species listed as endangered, threatened, or otherwise protected species (under Federal and/or state law; e.g. Endangered Species Act and/or Marine Mammal Protection Act, etc.)?

No. Red Snapper are not federally listed, but are protected with minimum size limits and seasonal closures in state and federal jurisdictions.

37. List non-target species that may occur in the proposed sampling area, and specify how many of each non-targeted species are expected to be caught?

Non-target species that may be encountered during sampling include various reef fishes and sharks. Most of the assessment will be conducted using visual methods, supplemented with collection for determining age. Most of this collection will entail working with fishers to conduct vertical line sampling, but may also entail limited use of bottom longline with short soak times. Vertical line gear is highly effective and selective for Red Snapper (over 90% of the total catch), so we expect relatively few non-target species to be captured. Sharks could also be captured on vertical line gear as well as bottom longline gear. Sharks will be released when captured.

