

REQUEST FOR PROPOSAL (RFP)

Fish Population Assessments using Diver Operated and Baited Remote Underwater Video Systems in Guánica and Boquerón Marines Reserves, Puerto Rico

Grant # F26AF00875-00

The Department of Natural and Environmental Resources (DNER) through the Wildlife & Sport Fish Restoration Program (WSFR) is seeking applicants to develop and perform fish population assessments utilizing diver-operated video (DOV) and baited remote underwater video (BRUV) systems in the Guánica State Forest (GSF) and Boquerón State Forest (BSF) Marine Reserve areas.

The GSF or Guánica Biosphere Reserve, located in southwestern Puerto Rico, is a globally important conservation area that encompasses a diverse mosaic of subtropical dry forests, mangrove cays, coral reefs, and seagrass beds. The effective management and conservation of these interconnected ecosystems depend on reliable, non-invasive monitoring of fish assemblages, which serve as essential indicators of reef health, ecological integrity, and fisheries sustainability.

Although traditional underwater visual census (UVC) methods have long been the standard for assessing reef fish communities, they are increasingly being complemented—or, in some cases, replaced—by advanced video-based monitoring techniques. These approaches provide greater accuracy, improved repeatability, reduced observer bias, and permanent visual records that can be archived and reanalyzed, making them valuable tools for long-term ecological monitoring and adaptive management.

This proposed study presents a comprehensive methodology for assessing fish assemblages in reef and seagrass habitats adjacent to four recreational fishing sites within the Guánica Biosphere Reserve—Tamarindo, Atolladora, Punta Ballena, and Congres—as well as two reef sites located near the BSF—Playa Combate (Puerto Angelino) and Belvedere Natural Reserve. Fish communities are to be surveyed using diver-operated video (DOV) and baited remote underwater stereo-video (BRUV) systems, two complementary techniques that enable standardized, non-destructive assessments across a range of habitats. This integrated approach is designed to maximize spatial and taxonomic coverage, reduce observer bias, and generate high-quality data on fish abundance, biomass, size structure, and community composition, providing a robust foundation for evaluating ecosystem condition and supporting long-term fisheries and conservation management.

The project has the following objectives:

- Quantify fish assemblages using DOV and BRUV systems across four sites at the GSF Marine Reserve and two at the BSF Marine Reserve areas.
- Provide a comprehensive assessment of fish communities, especially commonly targeted species by recreational anglers.
- Establish a permanent video archive and metadata repository

Tasks:

- Must comply with federal and commonwealth laws and regulatory as applicable like: Puerto Rico Environmental Public Policy Law, National Environmental Policy Act (NEPA), Regulation 4860, Regulation for the Management of Vulnerable and Endangered Species in the Commonwealth of Puerto Rico, among others.
- Develop a stratified transect design and associated sampling effort for both diver-operated stereo-video (DOV) and baited remote underwater video (BRUV) deployments, to be conducted at six-month intervals over a two-year study period. The sampling framework must ensure standardized spatial coverage, temporal replication, and comparability between methods across all survey sites.
- Design and implement field deployment protocols in accordance with the standards of the American Academy of Underwater Sciences (AAUS) or equivalent scientific diving and safety guidelines. All field operations must follow standardized procedures to ensure data quality, methodological consistency, and the safety of personnel throughout survey activities.
- Processing and analysis of all underwater video footage to quantify key biological metrics, including species composition, relative abundance, individual length measurements obtained through stereo-video analysis, and biomass estimates derived from species-specific length–weight relationships. Video analyses must be conducted using standardized protocols to ensure data quality, consistency, and reproducibility across sampling sites and survey methods.
- Statistical analyses should be conducted using current analytical software, such as RStudio, and must include, but not be limited to, estimates of fish abundance and biomass, species diversity metrics, size-frequency and population structure analyses, and comparative evaluations of sampling efficiency and potential biases between diver-operated stereo-video (DOV) and baited remote underwater video (BRUV) systems. Additional multivariate analyses of fish community composition and habitat associations may be performed as appropriate to address the study objectives.
- Submit biannual progress reports with each invoice.
- Submit a final report summarizing the following:

- Methodology used to design and implement the project
- Data summary and findings
- Comprehensive assessment of fish communities
- Final Management of video archive and metadata repository

Proposal content: The proposal should not exceed 10 pages in length. Pages more than 10 will not be reviewed. The proposal should address the following items in a concise, yet complete manner, and offer all the necessary information for the evaluation of the proposal:

(1) Title page.

- Project title
- Project locations(s)
- Project team/Project team organization – include name, title, affiliations and contact information of the project leader and key personnel.
- Project Cost- including deliverables (progress report, etc)
- Abstract- describe briefly the project being proposed and any important details.

(2) Proposal Narrative:

- **Goals and Objectives**
- **Methodology**- outline project design and describe tasks that will be completed to meet the project objectives
- **Site description**- provide a description of the sites. Include map(s) of the project area(s) and site photographs.
- **Roles and Responsibilities**- define the roles and responsibilities of all project participants
- **Relevant Experience**-briefly describe relevant experience of the project leader and partners.
- **Output, Outcomes, and Evaluation**- specify the expected products and results that will be produced over the course of the project. Discuss the methods to evaluate the effectiveness and success of the project.
- **Project Schedule** - dates for starting and finishing project, as well as a detailed time frame regarding reports, milestones and/or specific activities.
- **Project Budget** – matching funds are not required.

Eligibility: All entities authorized to work in Puerto Rico

Available funding: \$200,000.00

Estimated Timeframe: January 2027 through June 2029

Submittal: All proposals must be received by 4:00pm EST on Friday September 4th, 2026.

Applicants should submit both an electronic and hardcopy of their proposal as follows:

- Digital- pdf or *Microsoft Word* documents. Could be sent to joshua.morel@drna.pr.gov
- Hard copy- One hardcopies should be delivered to:

Joshua Morel Matos
Biologist
Department of Environment and Natural Resources
Bureau of Natural Protected Areas
Guánica State Forest
Edificio Cruz A. Matos
Carr. 8838 km 6.3 El Cinco
Río Piedras, PR 00936

Proposal Evaluation Process: Proposals that meet all the requirements of this RFP, will be evaluated by a review team of the BNPA. Proposals will be evaluated on the applicant's demonstrated ability to perform the tasks previously described. Evaluating the effectiveness of the proposed practices and partners involved will also weigh heavily. The criteria that will be used to evaluate the Proposals will be:

- a. Comprehensiveness of the proposal.
- b. Individual, or firm's experience and history of performance on similar projects, regarding such factors as quality of work, cost control, and ability to meet schedule.
- c. Adequacy of technical staff, as demonstrated by experience, education, and potential project role.
- d. Firm or individual understands of the services required by the DNER.
- e. Proposed costs.
- f. Organization and scheduling of the project requirements.
- g. Knowledge and ability to comply with federal procurement standards and grant regulations.
- h. Professional quality of the Project Proposal: conciseness, clarity, and thoroughness of presentation.

- i. Project manager accessibility.
- j. Ability to complete projects in a short period of time.

Consultant Selection Notification: DNER will notify the selection of the consultant not later than **Friday October 2nd, 2026.**

Other Special Conditions:

- This RFP does not commit to awarding a contract, to defray any costs incurred in the preparation of a Proposal pursuant to this RFP, or to procure our contract for work.
- All Proposals submitted in response to this RFP will become property of the DNER and will be public records, and as such they may be subjected to public review.
- The DNER, at its sole discretion, reserves the right to cancel this RFP for any or no reason, in part or in its entirety, including but not limited to: selection schedule, submittal date, and submittal requirements. If the DNER cancels or revises the RFP, all potential Contractors will received notification letter advising the cancelation or revision of the RFP.
- The DNER reserves the right to request additional information and/or clarifications from any or all potential Contractors participating in this RFP.
- Announcement of the selected contractor, contract awards, and all data provided by the DNER shall be protected from public disclosure. Consultants desiring to release information to the public must receive prior written approval from the DNER. The DNER, at its sole discretion, shall determine the release and disclosure of information related to this RFP and any final work products as a result of this.
- It will be required that, the selected Contractor signs a contract for Professional Services.