

GULF COUNTY RESTORE ACT PROJECT PRE-PROPOSAL FORM

Project Name: Invasive Lionfish Removal

Submitting Entity: Coastal Hydrology, Inc.

I. Please select one or more eligible activity that the project is classified under:

- Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region.
- Mitigation of damage to fish, wildlife and natural resources.
- Implementation of a federally approved marine, coastal or comprehensive conservation management plan, including fisheries monitoring.
- Workforce development and job creation.
- Improvements to or on State parks located in coastal areas affected by the Deepwater Horizon oil spill.
- Infrastructure projects benefitting the economy or ecological resources, including port infrastructure.
- Coastal flood protection and related infrastructure.
- Planning assistance.
- Promotion of tourism and seafood in the Gulf Coast region.

II. Please provide an executive summary of the project. Describe/quantify the economic (jobs, infrastructure, tourism, etc.) and environmental benefits (habitat, quality, knowledge, long-term sustainability, etc.).

Lionfishes are venomous species of scorpionfishes native to Indo-Pacific and oceanic coral reef ecosystems. Through accidental and purposeful release into warm Atlantic waters, they have become established as voracious alien species that pose a serious threat to coastal ecosystems in Bermuda, the American tropics of Florida, the Gulf of Mexico, the Caribbean islands, Central America, and northern South America.

As an aggressive ambush predator able to out-compete most native species for food resources with few known natural predators, lionfishes can quickly and alarmingly reduce local native reef fish and invertebrate populations, including the Gulf of Mexico's commercially and recreationally important snapper and grouper species. In addition to their voracious behavior, lionfish have a huge reproductive potential and an unprecedented adaptability to a variety of shallow and deep habitats. These factors combined have led scientists to believe the lionfish

invasion could become the most disastrous in history, destroying local fisheries and entire ecosystems.

As a result of the already documented lionfish invasion along the Florida Panhandle, Coastal Hydrology proposes a strategic culling of lionfish via active and passive measures, with hopes to slow their distribution and control present populations surrounding Gulf County. In doing so, we hope to limit the detrimental impacts of lionfish on the local reef communities as well as the residential and commercial fisheries in Gulf County. Additionally, an annual lionfish fishing rodeo could be conducted to promote tourism and environmental outreach in Gulf County.

III. Please provide a cost summary/budget. Detail any matching/cooperative funds available for use, and any cooperative support from governmental or other agencies.

For the purposes of successfully delaying the spread of lionfish and reducing populations surrounding Gulf County, Coastal Hydrology is requesting \$50,000 per year for a 5 year lionfish removal program totaling \$250,000. If an annual lionfish fishing rodeo is pursued, an additional \$10,000 per year would be needed for implementation.

IV. Please provide a timeline for project completion. Explain the technical and environmental feasibility (including any permitting considerations) of the project.

Coastal Hydrology is seeking a yearly contract with Gulf County to provide annual “visits” to sites either known to reside lionfish or are suitable for future colonization. “Visits” will entail the culling and subsequent removal of all visible lionfish from the area via passive (trapping) and active (spearfishing) measures. Along with culling, documentation of size and notable impacts to the surrounding reef community will also be maintained within a usable database. As an invasive species not subject to fishing regulations within both state and federal waters, no special permitting considerations are required for the culling of lionfish surrounding Gulf County.

Additionally, an annual lionfish fishing rodeo should be pursued to mass harvest the species. This event could be scheduled on an annual basis until the species is reduced to near zero numbers.

V. Please provide the qualifications of the Submitting Entity, the financial feasibility/sustainability and the economic feasibility and sustainability of the project (probability of success, etc.).

Chris Metcalf is the founder and principle investigator for Coastal Hydrology, Inc. and has 24 years of experience as a fishery biologist. Chris earned his Bachelor of Science degree from the University of Wisconsin Stevens Point and was awarded a Master of Science degree from the University of Louisiana at Monroe. His professional career includes extensive experience conducting stream assessments, fish population dynamics evaluations, aquatic habitat assessment, and hydrological and water quality monitoring. Chris is a PADI certified advanced scuba diver with over 20 years' experience as both a recreational diver and spear fisherman.

Cameron Morris is the Senior Project Manager and EIT for Coastal Hydrology, Inc. with 8 years of experience in fisheries and restoration. Cameron earned his Bachelor of Science degree in Ecology from the University of Georgia as well as a Master of Science degree in Civil Engineering from Florida State University. Cameron has extensive experience working in fisheries both internationally as well as throughout the Southeast and Western United States. Through his experiences working in both the public and private sectors, Cameron has acquired skill sets in environmental restoration, as well as biological and ecological samplings, assessments, and analysis. Cameron is a PADI certified diver with 7 years' experience as both a recreational diver and spear fisherman including extensive experience diving tropical ecosystems in the Indo-Pacific.

The combined experience and expertise in aquatic ecosystem function, diving, and spear fishing provide Coastal Hydrology a high likelihood of success in depleting populations of the invasive lionfish in areas surrounding Gulf County.

VI. Please provide the anticipated results of the project, and whether it is included in a City of Port St. Joe, City of Wewahitchka or Gulf County Comprehensive and Mitigation Plan?

Coastal Hydrology anticipates the successful culling and removal of invasive lionfish from areas surrounding Gulf County, thereby depleting lionfish populations and slowing their spread. In doing so, the additional stresses imposed by lionfish on aquatic ecosystems and native species such as the commercially important snapper and grouper will be reduced, improving commercial and residential fisheries for generations to come. Additionally, research involving experimental measures of lionfish removal (i.e. trapping) will be implemented, analyzed and reported on to provide guidance and effective management practices in dealing with the lionfish invasion for policy makers and stakeholders alike. Additionally, conducting an annual lionfish fishing rodeo would promote environmental awareness of sensitive saltwater habitat.

This proposal addresses the Gulf County Comprehensive and Mitigation Plan's Chapter 6, Objective 1.4, Policy 1.4.4.

Submitted By:

Chris Metcalf

Signature

Coastal Hydrology

Company Name

1304 Kristanna Drive, Panama City, FL, 32405

Address

Address

(850) 628 - 3117

Telephone Number

cmetcalf@coastalhydrology.com

E-mail Address (if applicable)

February 25th, 2013

Date

BOARD OF COUNTY COMMISSIONERS
GULF COUNTY, FLORIDA
RESTORE ACT COMMITTEE (R.A.C.)

1000 CECIL G. COSTIN SR. BLVD., ROOM 312, PORT ST. JOE, FLORIDA 32456
PHONE (850)229-6144 • FAX (850) 229-9252 • EMAIL: tkopinsky@gulfcounty-fl.gov

**PUBLIC RECORDS POLICY AND PUBLIC ACCESS ACKNOWLEDGMENT FOR
GULF COUNTY RESTORE ACT APPLICANTS**

I, Chris Metcalf the undersigned authority and/or representative of the entity Coastal Hydrology, Inc. and or the individual who has submitted the Gulf County RESTORE Act Proposal/Pre-Proposal titled Invasive Lionfish Removal hereby acknowledge, consent and accept the following representations that coincide with my/our submission for consideration, evaluation and possible recommendation and approval by the Gulf County Board of County Commissioners for funding from the RESTORE Act distribution that strictly complies with the guidelines and regulations set forth under the Restoration and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act of 2012:

1. I/We am the authorized representative of the application/pre-proposal referenced above.
2. I/We have thoroughly reviewed and familiarized myself and/or my entity on which I have submitted the application/pre-proposal on behalf of with the entirety of the Gulf County Public Records policy.
3. I/We have thoroughly reviewed and familiarized myself and/or my entity on which I have submitted the application/pre-proposal on behalf of with the entirety of the Florida Statute Chapter 119 which controls and permits public access to information.
4. I/We hereby acknowledge, consent and agree to the controlling policies and statutes above as well as the free and open exchange of any and all submissions provided hereunder this application/pre-proposal and all information exchanged hereafter including but not limited to further amendments to these proposals as well as surveys, studies, research, data production, books, drawings, property records, work papers, county owner lists, files, forms, reports, accounts, documents, manuals, handbooks, instructions, printouts relating in any manner for the production of the application. In addition, all papers, notes, data, reference material, documentation, programs, printouts, and all other media and forms of expression that in any way include, incorporate or reflect any confidential information of what ultimately shall become the Gulf County plans for use and application of the RESTORE Act funding.
5. I/We acknowledge, agree and fully consent to cooperate with the appointed Gulf County RESTORE ACT committee, county officials and staff as a continuing obligation and condition of final review for this RESTORE Act application/pre-proposal.
6. I/We have submitted this acknowledgment to Gulf County RESTORE Act Committee and the Gulf County Board of County Commissioners for the purpose and intent of receiving an evaluation, review and possible recommendations for anticipated funding from the Restoration and Ecosystems Sustainability, Tourist Opportunities and Revived Economies of the Gulf Coast States Act of 2012.


Signature of RESTORE Act Applicant

Date: 2/27/13

Chris Metcalf
Printed Name