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**NRAC FULL PROPOSAL REVIEW FORM**

Project Code/Title: 23-03: The Northeast Bivalve Hatchery Health Collaborative: Preventing larval mortalities in Northeast hatcheries.

Date Due: December 9, 2022.

1. **Science, Technology, and/or Extension Program Design (technical merit of all aspects of the project, 30%):** Does this proposal use top quality science and/or technology, or demonstrate extension scholarship? Is (are) the PI(s) familiar with relevant previous and contemporary investigations? Are the objectives and hypotheses explicit and clear? Is the experimental plan clear and the statistical design appropriate? Is the methodology described in the plan appropriate to meet the objectives for a research or extension project? Will this work advance understanding of the science and the contemporary problems that the industry faces? If this is an Extension-demonstration or education project do the PI(s) provide an adequate plan to evaluate the success of the effort? Are the proper metrics provided? Can the PI(s) properly assess the short-term, medium-term, long-term outcomes projected?

The proposed research aims to identify the causes of bivalve hatchery larval mortalities and crashes in the Northeastern US. It therefore addresses a specific priority (TRA-23-2) for this funding opportunity. It will achieve this through a collaborative, stakeholder-driven and proactive approach through the establishment of the Northeast Bivalve Hatchery Health Consortium, engaging both private and public sectors in terms of hatchery managers across the region. The Consortium will comprise a coordinating committee, hatchery working group, extension working group, survey and database developer (hired consultant), pathology working group and testing labs. The team is at the forefront of this type of research and is therefore exceptionally well positioned to conduct the work. The experimental plan is clear and based on both the current state of the knowledge when it comes to diagnostic techniques, but also leverages extension experience to facilitate communication, responsiveness and a sense of trust, given that a successful strategy for comprehensive enrollment of hatcheries is dependent upon anonymity.

Sample collection and design will be part of the proposed research, but is centered around SOPs that are informative but practical for hatchery staff to implement. Baseline methodologies are clearly laid out yet open to adaption. The proposed research has a very high probability of improving our understanding of a significant cause of lost production and economic loss to the shellfish industry across the Northeast U.S. The proposal was very clearly written with a very high level of attention to detail and clarity.

 *Excellent 28*

1. **Industry Relevance and Probability of Success (30%):** Are the benefits and potential impacts related to industry utility such as increased farm-gate value or grower profitability? Will the project likely provide usable results that can be adopted by the industry in a timely manner? Alternatively, if it is a development effort toward a new technology, will this project’s results increase the team’s capacity to compete for external funds to support the next iteration of research and outreach needed to take the results to application? Will this project create an opportunity for information to be turned over to the industry for refinement and adoption that will eventually become self-sustaining?

Larval mortality and hatchery crashes are a significant cause of reduced production and economic losses for the shellfish industry throughout much of the region, such that the establishment of a consortium of experts has tremendous potential value to industry. The project is certain to generate new information of value to industry in a timely manner and provide new insights into the causes of hatchery crashes by leveraging a suite of collaborators able to address a diversity of potential causes. The plan for dissemination of information is also robust, leveraging other existing networks for information sharing.

 *Excellent 28*

1. **Integration with Extension (20%):** Does this work identify the key stakeholders? Stakeholders include those individuals (industries and agencies) not directly involved in the project. Is the extension plan appropriately designed to reach the targeted stakeholders? How will the results of this work address the needs of key stakeholders? Will this project extend our knowledge to all stakeholders? Are the expected outputs, outcomes, and impacts clearly described? Is the budget appropriate for effective integration?

Yes. The project has engaged both public and private sectors and includes key players in both industry as well as extension and research. The information gained through the project will help hatcheries to identify and address causes of larval mortality thereby improving production and economic gains to the industry. Outcomes, outputs and impacts are clearly described and the budget is appropriate in supporting the constituent collaborators.

 *Excellent 19*

***4.* Capacity (10%):**

The team that has been gathered is truly impressive. Appropriate supporting facilities are described at both and URI for its partners. The team members have capacity and are conducting other relevant work that speaks to their expertise. The project has engaged industry and has commitment of active participation from multiple commercial entities. The budget is appropriate, easy to follow and clearly described. The project will yield valuable pathology information in the near term and also contribute in the long-term to a broader understanding of threats and patterns.

 *Excellent 10*

***5.* Accountability (10%):**

The PI has a proven track record of conducting productive research that has been adopted by industry both in terms of previous NRAC-funded research that she led and was co-PI on. This was relevant to both disease-resistant strains and the development of probiotics.

 *Very Good 9*

***6.* Total score: 94**

 **Rating Excellent**

**Final Recommendation: Must fund**