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**NRAC FULL PROPOSAL REVIEW FORM**

Project Code/Title: 23-04/ Impact of waterbirds on fecal coliform levels at floating gear oyster aquaculture operations

Date Due:

Please provide the information requested below. Length and detail of responses may vary according to the nature of the proposal. We value your honest appraisal and the format allows you to be as expansive as you deem necessary (feel free to use a separate sheet if necessary). Your comments and scoring will be shared with the principal investigator but with complete anonymity.

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?

*Comments:*

The proposal was well written and easy to follow. I am not convinced that the team is using the best science. EPA and RI recommend using enterococci as an indicator, rather than fecal coliform. Microbial source tracking to specifically identify birds is being used in a number of applications around the country. In light of the preference for enterococci as an indicator and the upswing of MST in the differentiation of sources of bacterial contamination, some discussion of why these were not included in the background is puzzling. I understand the measurement of Camplyobacter but not the fecal coliform testing. Also, use of quantitative microbial risk assessment (QMRA) is fairly common in the assessment of water quality at bathing beaches. This could be a good tool to quantify the human health risk associated with birds as a source of fecal pollution at shellfish facilities.

*Rating: Maximum score = 30*

Excellent (numerical value = 30) \_\_\_\_\_\_\_

Very Good (numerical value = 27) \_\_\_\_\_\_\_

Good (numerical value = 24) \_\_\_\_24\_\_\_

Fair (numerical value = 21) \_\_\_\_\_\_\_

Poor (numerical value = 18) \_\_\_\_\_\_\_

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?

*Comments:*

The project is relevant to the industry and could provide valuable information to farmers for decision-making about birds on shellfish beds. The project should be able to provide useful information to the industry in a timely manner.

*Rating: Maximum score = 30*

Excellent (numerical value = 30) \_\_\_\_\_\_\_

Very Good (numerical value = 27) \_\_\_\_27\_\_\_

Good (numerical value = 24) \_\_\_\_\_\_\_

Fair (numerical value = 21) \_\_\_\_\_\_\_

Poor (numerical value = 18) \_\_\_\_\_\_\_

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?

*Comments:*

The team is providing a number of extension outlets for the information.

*Rating: Maximum score = 20*

Excellent (numerical value = 20) \_\_\_\_\_\_\_

Very Good (numerical value = 18) \_\_\_18\_\_\_\_

Good (numerical value = 16) \_\_\_\_\_\_\_

Fair (numerical value = 14) \_\_\_\_\_\_\_

Poor (numerical value = 12) \_\_\_\_\_\_\_

**4. Capacity (10%):** Is (are) the principal investigator(s) and specified members of the research (extension) team qualified to conduct the research (program)? Is there industry representation as part of the team? Have the investigators clearly articulated they have adequate facilities and equipment to complete the project. Is the overall budget appropriate given the scope of the project? Is there a reasonable chance the project will be completed on-time?

*Comments:*

The team has excellent facilities and equipment. The design of the experiments seems robust. The team has strong credentials, and they propose to use farmers to consult on the project.

*Rating: Maximum score = 10*

Excellent (numerical value = 10) \_\_\_10\_\_\_\_

Very Good (numerical value = 9) \_\_\_\_\_\_\_

Good (numerical value = 8) \_\_\_\_\_\_\_

Fair (numerical value = 7) \_\_\_\_\_\_\_

Poor (numerical value = 6) \_\_\_\_\_\_\_

**5. Accountability (10%):** Does the investigator and her/his team have a successful track record of previous NRAC funding being adopted by the industry? Have they leveraged NRAC funding for additional resources to solve bigger problems that can be funded by NRAC alone? Is there evidence that the investigator(s) has (have) an established record indicating a high probability of success on the proposed work? Does the PI(s) have an established record of completing projects on-time meeting the objectives laid out in previous projects? Can this project integrate or be leveraged with funding from other work of the investigator(s)? Does the investigator(s) have a track record that suggests this project will be a good investment for NRAC resources?

*Comments:*

The team shows previous work being used by the industry. The team is experienced with producing high-quality research.

*Rating: Maximum score = 10*

Excellent (numerical value = 10) \_\_\_10\_\_\_\_

Very Good (numerical value = 9) \_\_\_\_\_\_\_

Good (numerical value = 8) \_\_\_\_\_\_\_

Fair (numerical value = 7) \_\_\_\_\_\_\_

Poor (numerical value = 6) \_\_\_\_\_\_\_

Non-Applicable – First Time Applicant \_\_\_\_\_\_\_

**6*.* Total score: \_\_89\_\_\_\_\_**

**Rating Excellent \_\_\_\_\_\_**

**Very Good \_\_\_X\_\_\_**

**Good \_\_\_\_\_\_**

**Fair \_\_\_\_\_\_**

**Poor \_\_\_\_\_\_**

**Final Recommendation: Must fund \_\_\_\_\_\_\_\_**

**Fund if resources are available \_\_X\_\_\_\_**

**Encourage Resubmission next year \_\_\_\_\_\_\_\_**

**Do Not Fund \_\_\_\_\_\_\_\_**

**7. Strengths:** What are the major strengths of this proposal? If you provided a rating of excellent for any of the categories above but did not comment, would you please share why you rated a particular category as “excellent”?

**8. Weaknesses:** Identify the weaknesses of this proposal. Are there any flaws (design, methodological, etc.) that might seriously compromise the scientific integrity, value and/or validity of the work? If you rated an evaluation area as fair or poor, how might that area of the proposal be improved?