

# PCCRC Graduate Fellowship in Fisheries Management and Marine Research



**Application Deadline: March 5, 2021**

The Pollock Conservation Cooperative Research Center (PCCRC)<sup>1</sup> was established in 2000 to improve knowledge about the North Pacific Ocean and the Bering Sea through research and education, emphasizing knowledge pertinent to the commercial fisheries of the Bering Sea and the Aleutian Islands. The PCCRC seeks graduate fellowship applicants for the 2021-22 academic year. Current and prospective graduate students are eligible to apply. The PCCRC Graduate Fellowship in Fisheries Management and Marine Research provides up to \$52,000 per academic year. The funds can be used to support a graduate stipend at the appropriate candidacy level, pay tuition (up to 18 credits per year) and graduate student health insurance, and up to \$2,000 in project-related research/travel expenses. Awards are renewable contingent on successful annual progress. PCCRC Graduate Fellows are eligible for up to 2 years of support. PCCRC Graduate Fellowships support excellence in graduate student research and are not Research Assistantships. **The fellowship competition is open to graduate students advised by University of Alaska (UAF, UAS, UAA) faculty.**

## Selection Criteria and Guidelines

1. Projects should address one or more of the *2021 PCCRC Research Priorities* (see below).
2. Projects should be distinctive and make an original contribution to existing knowledge.
3. Projects should have potential economic value to the fishing industry or contribute to long-term benefits for Alaska.
4. Research objectives should reflect potential for continued development as a scientific or applied initiative.
5. If completion of the research project depends on research funds beyond the limited funds provided with the Fellowship, the award may be contingent upon those other funds' receipt.

## Application Format

Applications should include a title page, up to four pages describing your research plan, a single page that details your budget request, a 2-page cv, and a listing of current and pending support for your project. The application must include the following:

### Title Page (1 page)

1. *Project Title*
2. *Applicant's Name*
3. *Advisor's Name*
4. *Degree Sought, Start Date, and anticipated End Date*
5. *Abstract*—A concise (no more than 300 word) summary of the proposed research.
6. *Research Priority*—Identify the *2021 PCCRC Research Priority* that your research will address.

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<sup>1</sup> PCCRC funding is provided by the *American Seafoods Company, Glacier Fish Company, Starbound LLC, and Trident Seafoods Corporation.*

## Research Plan (no more than 4 pages)

1. **Project Objectives.** Objectives should lie within the project's scope; they should be concise, specific, and attainable within the time, money, and human resources available and provide a discrete intended outcome.
2. **Project Design and Approach.** Project background, concept, experimental design and methods, and cited references should be detailed in this section. Applications will be judged on their demonstrated understanding of the problem being addressed, the present state of knowledge in the field, the project's relationship to previous and ongoing work, and the measurable benefits that will result from the proposed research. Present a list of clear hypotheses as appropriate. Describe how your research addresses the priority identified. Include the statistical and analytical approach, including assumptions, the sample size required, and model validation. What specific work, activities, procedures, statistical design, or analytical methods will you undertake? How will project results be disseminated?
3. **Milestones.** Present a timeline for major tasks, target milestones, important immediate and final products, and key project outcomes. This includes timelines for obtaining required permits (if any).
4. **Prior achievements.** In cases where the project is ongoing and has had other support, please list achievements of the project, or if appropriate, achievements of related projects directed by your advisor.

## Budget (1 page)

The budget should indicate amounts requested for your stipend, tuition, health insurance, and project-related travel and research expenses. Fellowships are generally for a full academic year, but requests for half-year funding will be considered. Please see appropriate department personnel for correct stipend and tuition rates and a standard project budget worksheet.

## Supporting Documentation

1. **Resume/CV.** (1-2 pages)
2. **Current and Pending Funding.** The proposal should indicate how any additional funding needed for the research will be obtained. If student funding has been requested and is pending for a research assistantship from another funding source (e.g., North Pacific Research Board, National Science Foundation, etc.), this should be noted—name current and pending sources of additional funding for this proposal. If there are no other pending sources of support, please state, “**No other student funding has been applied for from other sources.**”
3. **Faculty Advisor Endorsement.** Each application must be supported by faculty advisor endorsement. The faculty advisor must hold academic rank at the University of Alaska Fairbanks and be eligible to serve as the major professor for the degree sought. Endorsements should reference the student's capability and potential regarding the proposed research, the student's current academic standing/progress, and an estimated graduation timeline. (Endorsements can be submitted separately from fellowship applications but must be received by email to [keith.criddle@alaska.edu](mailto:keith.criddle@alaska.edu) no later than **5:00 p.m., March 5, 2021.**)

## Deadline and Submission Process

The title page, research plan, budget, and supporting documentation should be merged into a single pdf and emailed to [gdhazelton@alaska.edu](mailto:gdhazelton@alaska.edu) no later than **5:00 p.m., March 5, 2021.** For further information, please contact:

Dr. Keith R. Criddle, Director  
PCCRC Advisory Board  
(907) 796-5449 or [kcriddle@alaska.edu](mailto:kcriddle@alaska.edu)

Gabrielle Hazelton, administrative manager  
907-796-5443 or [gdhazelton@alaska.edu](mailto:gdhazelton@alaska.edu).

# PCCRC 2021 Research Priorities

For the 2021 funding cycle, the PCCRC has adopted the following research priorities:

## **I. Pollock Biology and Resource Utilization —**

1. The effect of temporal and spatial variations in pollock diets and condition on fatty acid profiles in pollock.
2. Research to identify key factors driving immigration and emigration of pollock outside of the standard eastern Bering Sea survey area.
3. a.) Research to identify the most important indicators of oxidative stability in fishmeal and fish oil, e.g., propanal, aldehydes, anisidine, and peroxide value  
b.) Investigate lab procedures/instruments appropriate to measure the most important indicators of oxidative stability of fish oil and fishmeal in both at-sea and onshore fish processing facilities, e.g., NIR, Safe Tests, etc.  
c.) Investigate alternative additives that provide for the optimal anti-oxidative properties of white fishmeal and fish oil, which maximize both stability and shelf life.
4. Research to investigate the presence, classification, and properties of microplastic contaminants in pollock products.

## **II. Fisheries Management and Incidental Catch (of FMP or PSC) Species —**

5. Cooperative industry research designed to mitigate bycatch and PSC through gear modification and changes in fishing practices.
6. Herring genetics, stock structure, and management: Compare Western Alaska herring genetic composition and age structure on overwintering grounds and spawning grounds to ascertain population structure; investigate a new approach to Herring PSC management in the Bering Sea pollock fishery.
7. Evaluate current (3-River index) and alternative management strategies for determining “low abundance” in Western Alaska Chinook salmon populations.

## **III. Habitat, Ecosystems, Protected Species —**

8. Research on ecosystem response to ocean warming, particularly relating to lipid-rich zooplankton abundance and juvenile pollock abundance and survival.
9. Develop empirical indicators that link ecosystem variability in the Bering Sea and changes to variability in growth, survival, and recruitment of pollock and Pacific cod stocks. Large-scale ecosystem changes in, e.g., sea-surface temperatures, sea ice coverage, zooplankton abundance, etc., could be indicators that growth, survival, and recruitment of fish stocks might be impacted and would be useful for linking ecosystem changes directly to management-relevant reference points such as OFL and ABC.
10. Evaluate potential environmental and anthropogenic drivers of fur seal declines on the Pribilof Islands.