



University of Alaska Fairbanks

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B1 Request for Support CFOS

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Terrance J. Quinn II, Professor

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Chris Oliver
Executive Director, North Pacific Fishery Management Council
Anchorage AK 99518

Dear Chris:

Gordon Kruse and I are seeking a letter of support from you and Dan Hull regarding our quantitative fisheries program here at CFOS. Both Gordon and I will be retiring in the next three years, and we both want to assure that our program remains strong and grows during this transition. If both of our positions are not filled due to budget cuts, we fear that our program could be severely damaged with insufficient quantitative faculty to teach our curriculum in fish population dynamics, fisheries management, and marine ecosystems.

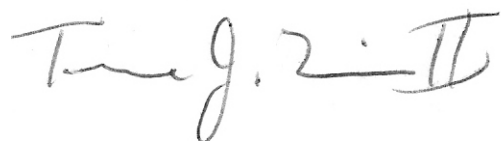
The College of Fisheries and Ocean Sciences (CFOS) of the University of Alaska Fairbanks (UAF) is a major contributor to the training of new scientists and technicians and to the scientific committees that provide advice to these government agencies. As you know, three of our professors and one alumnus are current Scientific and Statistical Committee of the NPFMC members and participate in at least five (3-4 day) meetings every year. I have been advising students and serving on these committees for over 31 years, and Gordon for almost 20 years. I have both advised and graduated over 40 graduate students, while Gordon has advised 12 graduates; many of whom are employed in Alaska state and federal fisheries agencies.

A solution to our impending problem can be found in a NMSF program. QUEST (Quantitative Ecology and Socioeconomics Training) enhances education and training for the next generation of stock assessment scientists, ecosystem scientists, and economists. This program has created positions and funded new professors at the University of South Florida, Scripps Institute of Oceanography, University of Hawaii-Manoa, University of Massachusetts Dartmouth, Woods Hole Oceanographic Institution, and University of Washington. We believe it would be appropriate to establish a QUEST position at CFOS, because our program is one of the top three, in the nation, in providing the stock assessment scientist training required by NMFS. In addition, our program would degrade significantly with the aforementioned faculty retirements during our current budget situation.

We seek your letter in support of our efforts to obtain a faculty position through QUEST, an effort supported by Dr. Douglas DeMaster, Science Director, Alaska Fisheries Science Center. As you know, the Alaska state budget is dire, and there is no guarantee that existing positions will be filled, as recent retirements in other CFOS disciplines (e.g., fisheries geneticist) have remained vacant. Your involvement would be a great help in preserving the quantitative scientific training that is essential to sustainable fisheries management in Alaska. Attached is a plan we developed for preserving and strengthening quantitative fisheries science at CFOS. Of course, we welcome any other ideas that you have to strengthen our program. Also, please contact me if you have any questions about our request.

Thank you for your consideration and assistance. If you are willing and able to assist us in providing a letter of support, please address your letter to Dr. Bradley Moran, Dean, College of Fisheries and Ocean Sciences, University of Alaska Fairbanks, and send it to me. I will see that it gets to Dean Moran.

Sincerely,

A handwritten signature in black ink, appearing to read "Terrance J. Quinn II". The signature is written in a cursive style with a prominent initial "T" and a stylized "Q".

Professor Terrance J. Quinn II
Juneau Center, College of Fisheries and Ocean Sciences
University of Alaska Fairbanks

Objective: Preserve Quantitative Fisheries Science in the College of Fisheries and Ocean Sciences (CFOS) at the University of Alaska Fairbanks (UAF)

Program Background:

Quantitative Fisheries Science, represented by faculty members Terrance Quinn, Milo Adkison, Anne Beaudreau, Keith Criddle, Gordon Kruse, and Franz Mueter, among others, is an internationally acclaimed strength of CFOS. This program is a center of excellence in contemporary innovative research; the close mentoring of graduate and doctoral students; and offers a highly specialized service to the state and nation. Our faculty members, within their respected disciplines, represent a breadth of disciplinary and methodological expertise to applied science as well as conceptual and methodological advancements.

Current Status:

Our strength and ability to continue the Quantitative Fisheries program at CFOS is vulnerable to faculty retirements in the near future. Professor Quinn will retire, leaving a huge gap in the field of single and multispecies fish population dynamics, fisheries stock assessment, and the use of fisheries management, management strategy evaluation, and statistics (sampling, experimental design). In addition, Professor Kruse has indicated his retirement as early as summer or fall 2018. This will create additional holes in stock assessment, ecosystem modeling, ecosystem-based fisheries management, and applied quantitative fisheries research. In addition to jeopardizing four catalog courses in the areas of marine ecosystem dynamics, ecosystem-based fisheries management, and two other popular fishery management courses.

NMFS published in 2008 a report about the inability to fill positions in quantitative fisheries science, particularly at the PhD level. This issue has persisted over subsequent decades.

A September 2008 report issued by the Departments of Commerce and Education, *The Shortage in the Number of Individuals with Post-Baccalaureate Degrees in Subjects Related to Fishery Science*, found the demand for stock assessment scientists exceeded the supply, resulting in an anticipated shortage of 20-180 stock assessment scientists over the next decade.

Key recommendations in the report to address these shortages were to:

- 1) Increase the number of faculty in the field of quantitative ecology
- 2) Increase the number of graduate students and post-doctoral associates in the field of quantitative ecology
- 3) Improve the quantitative skill-sets of incoming graduate students (in related disciplines)

The report describes nine core classes that it desired for such positions. Our UAF Fisheries curriculum was one of only three programs in the nation to offer all nine courses.

Proposed Solution:

NOAA Fisheries recently initiated the Quantitative Ecology and Socioeconomics Training (QUEST) program to enhance education and training for the next generation of stock assessment scientists, ecosystem scientists, and economists (<https://www.st.nmfs.noaa.gov/quest/index>). As of 2014, QUEST supports 5 full-time and 2 research quantitative ecology faculty around the country at a 5-year cost of \$4.3M (https://www.st.nmfs.noaa.gov/Assets/science_program/05_CapacityBldg_Oremland.pdf; see [Slide 5](#): “support for a faculty position at UAF also would be very helpful”). None of the hired QUEST faculty are associated solely with the AFSC; Trevor Branch at University of Washington is shared between NWFSC/AFSC.

Establish a QUEST position at CFOS to ensure protection of a pipeline that has provided expertise critical to management of fisheries resources in Alaska. Many of our students are now employed as NOAA stock assessment scientists (e.g., Olav Ormseth, Dana Hanselman, Kalei Shotwell, Dean Courtney, Peter Hulson, and Cindy Tribuzio) or as quantitative fisheries researchers for NOAA, ADF&G, or other agencies (e.g., Jason Gasper, Jennifer Stahl, Kari Fenske, Ben Williams, Kray Van Kirk, Ellen Yasumiichi, Karson Coutré). Moreover, UAF quantitative fisheries scientists fill critical review roles on federal, state, and international panels that determine stock status and set harvest limits for Alaska fisheries. Examples of 50 quantitative fisheries graduate students who are now working in agencies and the private sector is shown below.

One alternative to the QUEST program is for NOAA and UAF to share funding for a new faculty position.

Short-Term Action Plan:

- 1) Securing funds for an additional CFOS quantitative fisheries scientist to bridge the transition period when Quinn decides to retire.
 - a. Approach National Marine Fisheries Service in Washington, DC, to seek funding for a tenure-track faculty position in quantitative fisheries science at CFOS through the QUEST program. This would involve leveraging acquaintances with people in charge of stock assessment, such as Laura Oremland, Stephen K. Brown, Patrick Lynch, Rick Method, and Jason Link.
 - b. Approach Doug DeMaster (Director, Alaska Fisheries Science Center) and Phillip Mundy (director, Auke Bay Laboratories) to secure their support for a QUEST faculty position. This was accomplished in November, 2016, and their support has been secured.
 - c. Approach our U.S. Senators and Representative for their support.

- 2) Approach the UAF Provost to secure rehire approval for Kruse when he retires (perhaps as early as summer or fall 2018).
 - a. A replacement with expertise in quantitative fisheries (including ecosystem modeling) and fishery management (including ecosystem-based fisheries management) would allow CFOS to continue current course offerings and extends our expertise into the rapidly developing field of ecosystem-based management.

- 3) Approach Scott Kelley, Director of the Division of Commercial Fisheries, ADF&G, to encourage ADF&G reinstating their joint-funded Graduate Studies program.
 - a. Will provide tuition funding and a release time for 1-2 ADF&G employees annually to obtain a graduate degree, while working on applied fishery science projects of interest to the state.
 - b. Agencies in other states (e.g., Oregon Department of Fish and Wildlife) have a history of state-university joint funding for faculty positions to work on applied fishery research projects of mutual interest.
 - c. ADF&G also suffers from declining state funding, so open discussions may be postponed until the budget improves.

- 4) Establish a Center for Quantitative Fisheries Excellence (CQFE) within CFOS.
 - a. Enhance visibility of our curriculum and promote an interdisciplinary quantitative fisheries program within CFOS.
 - b. There are a number of such centers within big fisheries schools (University of Washington, Michigan State University, University of Maryland), and the visibility of a quantitative focus makes these institutions very competitive for grants, research assistantships, and post-doc positions.
 - c. CQFE would operate using existing resources within the Department of Fisheries and anticipate no need for additional direct funding from CFOS or UAF.
 - d. Request CFOS share 5% of indirect cost returns from grants led by CQFE faculty to generate additional resources.

Examples of CFOS Quantitative Fisheries former students, (Advisor), current position, and location:

1. Dr. Jason Gasper (Kruse), Catch Accounting, NMFS-Alaska Region Office, Juneau, AK
2. Dr. Jonathan Richar (Kruse), Research Fishery Biologist NMFS-AFSC-Kodiak Lab, Kodiak, AK
3. Dr. Peter-John Hulson (Quinn), Stock Assessment, NMFS-AFSC-TSMRI, Juneau, AK
4. Dr. Jonathan Heifetz (Quinn), Program Manager, NMFS-AFSC-TSMRI, Juneau, AK
5. Dr. Dana Hanselman (Quinn), Stock Assessment, NMFS-AFSC-TSMRI, Juneau, AK
6. Dr. S. Kalei Shotwell (Adkison), Stock Assessment, NMFS-AFSC-TSMRI, Juneau, AK
7. Dr. Cindy Tribuzio (Kruse), Stock Assessment, NMFS-AFSC-TSMRI, Juneau, AK
8. Dr. Lewis Coggins (Quinn), Fishery Biologist, USFWS, Bethel, AK
9. Dr. William Bechtol (Smoker/Kruse), Quantitative Fisheries, Bechtol Research Inc., Homer, AK
10. Dr. Sara Miller (Quinn), Biometrician, ADF&G, Douglas, AK
11. Dr. Jie Zheng (Fagen), Biometrician, ADF&G, Juneau, AK
12. Dr. Robert Marshall (Quinn), Biometrician, ADF&G, Douglas, AK (retired)
13. Lowell Fair (Quinn), Coordinator (formerly Biometrician), ADF&G, Douglas, AK
14. William Templin (Collie), Fisheries Scientist, ADF&G, Anchorage, AK
15. Gregg Rosenkranz (Tyler), Biometrician, ADF&G, Kodiak, AK (retired)
16. Olav Ormseth (Norcross), Stock Assessment Scientist, Alaska Fisheries Science Center, Seattle WA
17. Kari Fenske (Quinn), Stock Assessment Scientist, NMFS-AFSC-TSMRI, Juneau AK
18. Jennifer Stahl (Kruse), Fishery Biologist (stock assessment), ADF&G, Douglas, AK

19. Katie Palof (Gharrett), Biometrician, ADF&G, Douglas, AK
20. Dr. Kray van Kirk (Quinn), Biometrician, ADF&G, Douglas, AK
21. Dr. Sara Miller (Quinn/Adkison), Biometrician, ADF&G, Douglas, AK
22. Benjamin Williams (Kruse/Quinn), Fisheries Scientist, ADF&G, Juneau, AK
23. Jane Sullivan (Kruse), Catch Accounting Intern, NMFS-Alaska Region Office, Juneau, AK
24. Dr. Harold Geiger (Gharrett), Biometrician, ADF&G, Juneau, AK (retired)
25. David Ackley (Mathisen), GIS Research Analyst, NMFS-Regional Office, Juneau, AK (retired)
26. Dean Courtney (Adkison), Res. Fishery Biologist (Stock Assessment), NMFS-SEFSC, Panama City, FL
27. Dr. Erik Williams (Quinn), Chief-Sustainable Fisheries, NMFS-SEFSC, Beaufort, NC
28. Dr. Haixue Shen (Quinn), Research Associate, Louisiana State University, Baton Rouge, LA
29. Dr. Caihong Fu (Quinn), Research Scientist, DFO-Pacific Biological Station, Nanaimo, BC, Canada
30. Dr. Shijie Zhou (Shirley), Fishery Scientist, CSIRO, Brisbane, Australia
31. Dr. Brian Battaile (Quinn), Research Associate, University of British Columbia, Vancouver, BC, Canada
32. Suzanne Teerlink (Quinn). PhD student, CFOS, UAF, Juneau AK
33. Robert Foy (Reynolds), Director, Kodiak Lab, Alaska Fisheries Science Center, Kodiak AK
34. Ellen Yasumiichi (Criddle), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK
35. Karson Coutré (Beaudreau), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK
36. Bryce Mecum (Adkison/Quinn), Analyst, Center for Ecological Research, Juneau AK
37. Bonita Nelson (Quinn), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK
38. Dr. Ron Heintz (Smoker), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK
39. Dr. Jeff Short (Stekoll), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK (retired)
40. Dr. Joe Liddle (Quinn), Associate Professor, University of Alaska Southeast, Sitka AK
41. Dr. Peter Hagen (Quinn), Associate Director, NMFS-AFSC-TSMRI, Juneau AK
42. Chris Lunsford (Haldorson), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK (retired)
43. Steve Ignell (Fagen), Administrator, Alaska Fisheries Science Center, Seattle WA
44. Ben Carney (Gharrett), Science Teacher, Juneau –Douglas High School, Juneau AK
45. Elizabeth Siddon (Mueter), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK
46. James Murphy (Collie), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK
47. Dr. Ed Farley (Mathisen/ Adkison), Fisheries Scientist, NMFS-AFSC-TSMRI, Juneau AK
48. Johanna Vollenweider (Kelly), NMFS-AFSC-TSMRI, Juneau AK
49. Dr. Mayumi Arimitsu (Hillgruber), USGS, Juneau AK
50. Dan Bosch (Quinn), Fisheries Scientist, ADF&G, Anchorage AK