



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

JUN 05 2019

Mr. David Witherell  
Executive Director  
North Pacific Fishery Management Council  
605 W. 4<sup>th</sup> Avenue, Suite 306  
Anchorage, AK 99501

Dear Mr. ~~Witherell~~:

Dave

Thank you for your letter of May 9, 2019, regarding the effects of funding constraints on the Alaska Fisheries Science Center's (AFSC) ability to conduct process studies and core stock assessment surveys. I appreciate the concerns of the North Pacific Council to ensure that needed scientific products are available to form a sound basis for management decisions that directly impact a large portion of our nation's seafood supply. I also share your concerns about the unprecedented challenges presented by rapidly changing environmental conditions and their impacts on fishery resources and the communities that depend on them. Subsequent to Dr. Foy's presentation to the Council at its April 2019 meeting, NOAA's National Marine Fisheries Service (NMFS) headquarters provided additional permanent funding to the AFSC to support stock assessment surveys. However, the magnitude of this increase will not address the need to annually survey the northern Bering Sea.

NMFS strives to maintain a balanced research portfolio that both provides information needed for current management decisions and improves our understanding of complex population and ecosystem dynamics. However, our ability to execute all high-priority research is limited by available funding and further constrained by increasing fixed costs and changing environmental conditions that, as noted in your letter, have significantly increased the scope of our mission. Because the AFSC has already cut lower-priority research, a balanced research portfolio with the current funds available will require doing less of some core stock assessment activities and/or important basic process studies.

To help investigate these trade-offs, AFSC staff are undertaking several studies to more fully understand and quantify the effects of reducing survey and sampling effort, as well as the potential benefits of increasing these activities. These studies should improve our ability to quantitatively evaluate the degree to which management advice is affected by different survey and sampling portfolios, some of which may include more process-related research. For example, if in some years we find that additional survey information will have a minimal impact on assessment uncertainty and allowable catch, funds may be better used by undertaking process research. In a recent paper<sup>1</sup> and NOAA Technical Memo<sup>2</sup>, NMFS authors identify six steps in the science-to-management process and offer recommendations to better account for and respond

<sup>1</sup> <https://academic.oup.com/icesjms/advance-article/doi/10.1093/icesjms/fsz048/5474997>

<sup>2</sup> <https://spo.nmfs.noaa.gov/content/tech-memo/accounting-shifting-distributions-and-changing-productivity-fishery-management>



to climate-related shifts in species distributions and changing productivity in fisheries management. The first step underscores that having information to detect and understand changes is critical to developing appropriate management approaches that account for and can respond to changing conditions. Dr. Foy and his staff will be available to present the results of this proposed research at future Council meetings.

Rapidly changing environmental conditions have created many new management issues for all five of our Alaska Large Marine Ecosystems. Changes to habitat, predator-prey relationships, parasites, and hosts all have the potential to alter mechanisms determining fish and shellfish recruitment. They also have the potential to alter key variables used in our stock assessment models (e.g., growth, fecundity, and survival). NMFS recognizes that uncertainty in surveys, population dynamics, and ecosystem conditions also impacts the recommended biological reference points. Our annual planning process and strategic science plan for Alaska will continue to strive for balance among our activities, between survey and process, and among the different geographic regions. Our inability to address all high-priority needs in the Alaska Region is not due to a lack of prioritization at the AFSC or recognition of needs, but simply constrained resources.

These are challenging times that require increased cooperation, coordination, and partnership. I look forward to continuing to strengthen ties to the Council and to work together to address mutual challenges and to achieve our shared stewardship mission.

Sincerely,

A handwritten signature in black ink that reads "Chris Oliver". The signature is written in a cursive, flowing style.

Chris Oliver  
Assistant Administrator  
for Fisheries