
From: Luster, Tom@Coastal <Tom.Luster@coastal.ca.gov>
Sent: Friday, December 30, 2016 10:25 AM
To: Julian Koslow
Cc: Bennett, Steve; Ainsworth, John@Coastal; JHaggmark@SantaBarbaraCA.gov; smaloni@poseidonwater.com; Mulligan, Susan; John McGowan; Miller, Eric
Subject: RE: Ocean desalination in Ventura County forum

Thanks, Dr. Koslow, for your message below. Unfortunately, it seems you have misinterpreted my comments. I did not state that the overall significant decline in plankton populations was due to entrainment from open intakes. My point, with which I hope you would concur, is that the population decline resulting from the large-scale forcing you identified makes it difficult for a new proposed project that would represent an additional adverse effect to meet the Coastal Act's requirement to maintain and enhance marine life productivity. Put as a question, how can one maintain and enhance productivity in a system in steep decline by adding something that would further reduce productivity?

I'm happy to discuss further if you like after I return next week. Thanks again for your attention to my presentation, and for your very useful paper.

Tom Luster

From: Julian Koslow [jkoslow@ucsd.edu]
Sent: Thursday, December 29, 2016 5:09 PM
To: Luster, Tom@Coastal
Cc: Bennett, Steve@Ventura; Ainsworth, John@Coastal; JHaggmark@SantaBarbaraCA.gov; smaloni@poseidonwater.com; smulligan@calleguas.com; John McGowan; Miller, Eric
Subject: Ocean desalination in Ventura County forum

UNIVERSITY OF CALIFORNIA, SAN DIEGO UCSD

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SCRIPPS INSTITUTION OF OCEANOGRAPHY

9500 GILMAN DRIVE

December 29, 2016 LA JOLLA, CALIFORNIA 92093-0209

PHONE: (858) 534-3234

FAX: (858) 534-0300

Mr. Tom Luster
Senior Coastal Analyst
California Coastal Commission

Dear Mr. Luster,

We recently viewed the archived video of December 1, 2016 presentation at the Ocean Desalination in Ventura County forum ([video link](#)). At 1:08:43 into the video, you showed Figure 2 from our 2015 research article published in the journal *Marine Ecology Progress Series* (volume 538:221-227) entitled “Dramatic declines in coastal and oceanic fish communities off California”. While we appreciate your interest in our research, your comments accompanying the figure appear to misrepresent our results and conclusions.

In the video, you stated: *“Another key issue that argues against open intakes, this represents the decline of plankton off Southern California. It represents about 75% since early 70s. It’s hard to maintain and enhance marine life like the Coastal Act requires in a situation like this and so open intakes have a hurdle to overcome.”*

This statement represents an inaccurate understanding of our research. The figure that you presented from our paper shows that both nearshore and offshore fish communities off southern California were in stark decline as measured by two very different time series:

1. The CalCOFI program which samples mostly the offshore waters of the California Current (PC2 CalCOFI in the figure), and
2. Juvenile and adult impinged in the fish monitoring at coastal California power plants (PC1 PPI in the figure).

Thus, as we pointed out in our paper, “many of the taxa are predominantly distributed offshore but share the same trend as more coastal taxa.” It is therefore not reasonable to attribute this decline to the impact of coastal development or nearshore power-plant intakes. We also noted that the declines predominantly affected cold-water affinity taxa and therefore concluded that “large-scale environmental forcing [was] the key factor driving this change.”

We have included a reprint of the published article for your review. Should you have any questions, feel free to contact any of us. Dr. McGowan and I can answer any questions regarding the CalCOFI data, while Mr. Eric Miller would be the best source for information regarding the power plant data. We ask that you refrain from repeating your Ventura forum comments, or anything similar, as it presents an almost exactly opposite conclusion to that obtained by our research. Again, the figure you presented shows the offshore taxa sampled by CalCOFI are declining in a nearly identical pattern as those measured by the power plant monitoring. This demonstrates that large-scale ocean forcing rather than local coastal processes, such as power plant water intakes, are driving the changes we have observed off our coast since the 1970s.

Thank you for your attention to this matter. We hope our science can help inform regulatory decisions wherever applicable, but the science needs to be interpreted correctly.

Sincerely,



J. Anthony Koslow, Ph.D.
Research Oceanographer (Emeritus) and Lead Author

Scripps Institution of Oceanography
University of California, San Diego
(858) 534-7284

Eric Miller, MS
millerbiology@gmail.com

John McGowan, Ph.D.
Scripps Institution of Oceanography
University of California, San Diego
jmcgowan@ucsd.edu

CC:

Supervisor Steven Bennett steve.bennett@ventura.org

John Ainsworth John.Ainsworth@coastal.ca.gov

Joshua Haggmark, Water Resources Manager, City of Santa Barbara,
JHaggmark@SantaBarbaraCA.gov

Scott Maloni, Vice President, Project Development, Poseidon Water, smaloni@poseidonwater.com

Susan Mulligan, P.E., General Manager, Calleguas Municipal Water Company,
smulligan@calleguas.com