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To Whom It May Concern:

I am writing to provide my expert opinion on the importance of coastal areas for inland populations, and thus the importance of maintaining and furthering connectivity between these ecosystems. I have worked on issues of ecosystem connectivity and conservation for 15 years, with a particular focus on marine to terrestrial ecosystem connectivity. I have authored or coauthored >20 papers on this topic, including several synthetic reviews.

The importance of marine subsidies to terrestrial ecosystems was first recognized in the mid 1990s and there is now robust data showing the importance of these connections at every level of the food web from below ground ecosystem processes, to plant productivity and community composition, to top level inland consumers such as bears, wolves, foxes and coyotes and across desert, tropical, and tundra ecosystems. These subsidies are known to change abundance, behavior, growth rates, reproductive rates and even evolution of terrestrial consumers and also to change ecosystem processes and alter stability of food webs, as they often provide critical resources at times when terrestrial ecosystems are relatively barren. The bottom-up effects alone of marine subsidies can cause state change across entire ecosystems (e.g. transformation of grassland to tundra). Moreover, because subsidies can allow predators to persist through times of other food shortage, they also can change top-down control to ecosystems in locations far from the donor system (the ocean).

These ecosystem connections to inland consumers have been less extensively studied in Santa Barbara. However, there is extensive work on the importance of marine wrack on local sandy beaches, demonstrating the critical food subsidy provided by these subsidies to coastal communities (largely led by Jenny Dugan at UCSB; see Liebowitz et al 2016) and multiple lines of evidence that document carnivores foraging in coastal communities locally. While, to my knowledge, the importance of this linkage in local ecosystems has not been quantified, there is every reason to believe that these linkages will be very important to many local consumer groups and to inland ecosystems.

It is my opinion that maintaining access to shoreline for inland consumers is critical. Please feel free to contact me with any questions.

Sincerely,

A handwritten signature in blue ink that reads "Hillary Young".

Hillary Young

SELECTED READING

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