Response of Paul Weiland to Question from Rep. Wittman

Too often, insufficient information is used to create MMPA-related rules even when almost zero takes or incidents occur. It seems that many of these rules have been promulgated "by analogy." The differences in large marine mammal populations in offshore and inshore waters are significant. We don't see whales and manatees and sea otters up in the Chesapeake Bay. The agencies implementing and enforcing MMPA should recognize these differences. Why, in your opinion, why would we place additional MMPA enforcement onto industries that don't even impact marine mammals in the first place? And how can we ensure accurate data collection of impacts on mammal populations to prevent disruptions to inland fisheries?"

In general, the Marine Mammal Protection Act (MMPA) requires National Marine Fisheries Service (NMFS) to use the best scientific information available. Congress does not define the term "best scientific information available" in the MMPA, but it is logically defined to mean the best scientific information available at the time of the agency action or determination, including credible and reliable data, quantitative analyses, and conceptual and numerical models, taking into account the reliability and the known or potential sources of error, and carried out using prevailing principles, methods, tools, and professional standards of practice. The best scientific information should be impartially gathered and objectively evaluated in accordance with its reliability and scientific rigor; it should not be distorted by applying policy judgments such as erring on the side of the species. When NMFS personnel depart from value-neutral assessment of the best scientific information by putting a thumb on the scale, the agency is more likely to regulate (or over-regulate) activities that do not harm marine mammals disrupting otherwise lawful and productive conduct.

NMFS relies on models to inform its assessment of the status of marine mammals and their habitats and the effects of human activities on them. Quantitative models, developed by NMFS staff and informed by a combination of available data and assumptions, allow NMFS to draw inferences regarding the size and distribution of marine mammal populations and the factors that affect the population growth rate of those populations including those factors that contribute to deaths of marine mammals. These models are a simplification of reality as the National Academies explained in the 2007 volume *Models in Environmental Regulatory Decision Making*, and model outputs (or predictions) often are characterized by substantial uncertainty.

Because available data regarding marine mammals is limited, NMFS must make assumptions when building and running models to draw inferences, such as inferences regarding the relative contribution of various factors to marine mammal deaths. For example, with respect to the North Atlantic Right Whale, NMFS has gathered data regarding entanglements in fishing gear. Over the period 2010-2019, NMFS identified 112 instances of observed Right Whale entanglements in fishing gear. In roughly three quarters of those cases, NMFS could not determine whether the country of origin of the gear was Canada or the U.S. But to run its quantitative model to develop projections of the relative contribution of the U.S. lobster fishery and other U.S. and Canadian fisheries to Right Whale entanglements and deaths, NMFS built an assumption into the model that entanglements of unknown origin should be split 50-50 between the two countries.

In arriving at this 50-50 split, NMFS discarded available scientific data it had on entanglements of known origin. In roughly one quarter of the cases of observed entanglements, NMFS was able to determine the country of origin. And in those cases, 69 percent were attributable to Canada and 31

percent were attributable to the U.S. The agency could have apportioned unassigned observed entanglements based on those observed data, yet the agency chose to use a 50-50 split. Assumptions in agency models such as this have led agencies to misestimate the status, trend, and/or distribution of species as well as the risk posed to species due to human activities. The best means to reduce the potential for errors that could harm wildlife and society are to design and implement data collection regimes that are focused on highest priority management needs and to continue to develop and implement best practices (ser forth in the above definition of the best scientific information available) in a manner intended to minimize uncertainties and also to daylight any assumptions that stem from such uncertainties. As important, when the agency shifts from value-neutral development and articulation of the best scientific information available to value-laden policy judgments regarding areas of uncertainty, it should engage stakeholders in the decision-making process and be transparent about the policy judgments applied.