United States Department of Agriculture

Animal and Plant Health Inspection Service

Policy & Program Development

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Dear Mr. Carlesco,

We have reviewed your Information Quality Compliant requesting that APHIS retract the University of California, Coop. Ext. Serv. Bulletin 1872 publication, Connolly, G.E. and W.M. Longhurst, 1975, *The Effects of Control on Coyote Populations: A simulation Model* ("Connolly and Longhurst"). APHIS assembled an ad hoc panel to review your Request for Reconsideration and assess whether or not our review of your request was conducted with due diligence. The review panel was comprised of members of our science leadership. APHIS Wildlife Services excluded themselves from the panel. The panelists independently reviewed the Request for Reconsideration and concluded that our response in July 2018 was objective and accurate.

In your Request for Reconsideration, you cited the age of the Connolly and Longhurst's Bulletin, henceforth referred to in this letter as the 'C-L Model.' PEER deems this work obsolete due to the age of the publication. The age of this study does not necessarily render the work obsolete. The work of the C-L Model was based on a study previously done by Frederik F. Knowlton in 1972. The C-L Model has foundations in a deer simulation model from the same geographical and ecological area (Mendocino County, CA) as the coyote study, where concrete coyote data from the county was compared in parallel with the simulation, and the local population seemed to actually increase under control pressure. This does not support an extermination bias and lack of real-world correlations of the model.

Connolly and Longhurst considered the existing literature at the time, stating that coyote population numbers cannot be truly controlled by harvesting them. They concluded that very high levels of population control are needed to have an effect. They determined that 70 percent control is sustainable, and 75 percent is at the upper limit of what can be withstood, but even at that extreme, a half century must pass at that level to result in any approximation of extermination.

The originators of the C-L Model do consider public perception and the acceptability of various control methods, and tout birth control as the best way. Preventing animals from being born is presented as preferred control method over harvesting animals. Connelly and Longhurst repeatedly declare that the

rebound rate is dramatic, and there is little concern of endangered designations. The goal is to find a balance to decrease depredation versus indescriminate erasure. APHIS considers multiple approaches to prevent predation.

A final observation is related to the nature of risk characterization and risk management. The intent of risk assessment is for APHIS to determine whether the preponderance of evidence support a given program. In addressing coyote management, the Agency has used evidence that began with Connolly and Longhurst and has continued to explore whether the fundamental findings in that document are backed up by more recent modeling research,actual experience, and actual observations. The preponderance of evidence, as well as recent modeling tools, show that coyote populations at the landscape level are not harmed by local management programs.

APHIS acknowledges the variety of research that shows the limitations inherent in any program, and recognizes the value of both lethal and non-lethal approaches. APHIS engages in a continuous exploration for new scientific methods and tools and maintains cadres of scientists to help inform and advance its mission. We are committed to sharing the scientific references that inform our programs. Importantly, the value of population management efforts at the local level is substantiated by the continued need expressed by landowners and ranchers. Risk management is a compromise between the difficulties presented by the management practice and the benefits society enjoys from its application. Risk analysis is thus a balance between the nature of risks and the effectiveness of risk management measures. The risk associated with coyotes in managed lands is documented and current evidence supports that the management of local coyote populations advances the needs of landowners and ranchers..

The APHIS review panel concluded that the Connelly and Longhurst's Bulletin has generous and appropriate assumptions and conclusions, and responsibly reports the data. APHIS believes that the Bulletin remains relevant and timely as a part of a comprehensive reference cache for development of predator control programs and overall ecosystem management systems in the United States.

Sincerely,

MARY WILLIAMS

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Mary Connie Williams
Information Quality Officer
USDA APHIS