Comments from the WAFWA Mule Deer Working Group regarding the "*Findings of the Mule Deer Restoration Committee of the Nevada Board of Wildlife Commissioners*"

In 1997, the Western Association of Fish and Wildlife Agencies (WAFWA) established a Mule Deer Working Group (MDWG) consisting of a representative from each of the 23 member states and Canadian provinces. Since that time, the working group has been successfully addressing mule and black-tailed deer concerns shared among wildlife agencies in western North America. This working group has been very successful in their efforts to reach those goals and is considered one of the most respected and productive working groups ever sponsored by WAFWA. With over 80 current and past contributing members representing the entire range-wide distribution of mule deer in western North America, the MDWG is the largest collection of professional mule deer biologists anywhere in the world. As such, the MDWG is uniquely qualified to provide professional technical information and insights based on the large breadth of knowledge and experience with mule deer management practices. The MDWG reviewed and evaluated the information and ideas contained in the December 2010 document titled: "*Findings of the Mule Deer Restoration Committee of the Nevada Board of Wildlife Commissioners*.**"** The document in question accurately identifies many of the issues affecting mule deer throughout their range. While the issues identified and discussed throughout the Nevada document are important to mule deer conservation, the supportive information and proposed resolution is incomplete and in many cases, inconsistent with a large body of scientific literature and professional management experience of other state and provincial wildlife agencies. In fact, some of the proposed resolutions are fundamentally contrary to the best scientific information available regarding issues such as: carrying capacity, livestock grazing strategies, wildfire, predation, deer and elk competition, and hunting season structures. As such, it may be useful to WAFWA agency decision-makers to benefit from the collective knowledge and professional experience of the Mule Deer Working Group regarding the issues raised in the Nevada document. In many cases, the information has already been assembled in previously published MDWG products.

CARRYING CAPACITY: Statements by the NV Wildlife Commission's Mule Deer Restoration Committee:

- "*We live in an era in which some wildlife managers have come to utilize unscientific arbitrary suppositions claiming we are at carrying capacity as justification for their inaction in restoring our mule deer herds."*
- *"Studies done in other states clearly show that carrying capacity is likely far larger than most methods of calculation demonstrate."*
- *"The concept of deer being at carrying capacity, …, is not scientifically based and should be considered as being politically or socially motivated."*

WAFWA Mule Deer Working Group Response:

The concept of carrying capacity is critically important to any discussion with respect to mule deer population dynamics and, ultimately, proper management. The Nevada document readily dismisses the concept of carrying capacity as "*not scientifically based.*" However, while

demanding "*evidence to justify carrying capacity limitations*," the document preemptively discredits the best available evidence, deer body condition data. University wildlife management courses worldwide teach the concept of carrying capacity because it is one of the most fundamental concepts in population ecology. Carrying capacity limitations are not a critical issue in all mule deer management situations, but WAFWA agency biologists understand it is a solid underlying principle that must be understood to manage deer populations properly. Carrying capacity can be difficult to measure accurately, but this document is absent of any supporting information that it is "higher than estimated."

HABITAT, GRAZING AND WILDFIRES: Statements by the NV Wildlife Commission's Mule Deer Restoration Committee:

- *"Many riparian areas have been found to be over-protected from grazing and a lack of grazing (by any ungulate species, wild or domestic) has created far worse range condition than any amount of grazing previously did."*
- Recommend *"Dramatic increases in upland AUMs for both cattle and domestic sheep."*
- Recommend *"Dramatic increases in intensive, managed, rotational grazing of riparian areas."*
- Recommend *"Dramatic increases in managed grazing on recently burned areas."*
- *"In most cases in Nevada, under-utilization of feed has resulted in worse habitat conditions than over-utilization."*
- *"Lack of grazing in many areas has allowed overgrowth of fuels, which contributes to rate of fire spread. This is caused by the uncontrolled proliferation of a continuous terrain covering of fine flashy fuels, including matted and uneaten materials in many areas, particularly in prime habitat."*
- *"There has been a vast reduction in meadow, and other spring / stream irrigated areas due to overgrowth that was previously removed by grazing, woodcutting, and of maintenance of public land that was previously done by ranchers. Water diversions have been reduced that were previously maintained by ranchers. These diversions previously created larger healthier meadows. These meadow / spring / stream / water diversion changes have resulted in smaller green fire-resistant areas."*

WAFWA Mule Deer Working Group Response:

The issue of grazing is a primary focus of the Nevada document. The MDWG acknowledges that livestock grazing can be a beneficial tool in maintaining and creating mule deer habitat. However, many of the recommendations contained within the "habitat," "grazing," and "wildfire" sections are not supported by a large body of science and will likely lead to the exact opposite of the intended effect(s), thereby causing further negative impacts to mule deer and their habitats. It is well documented and widely accepted that neither dramatic increases in grazing of riparian areas and upland sites (especially with sheep), nor grazing of recently burned areas will benefit mule deer, especially in arid ecosystems. The MDWG Mule Deer Habitat Guidelines for all 7 North American ecoregions provide detailed discussions and reference to pertinent science regarding the relationships between livestock grazing, fire, and mule deer habitat needs. These guidelines have been reviewed and accepted by leading scientists and managers throughout North America and provide valuable management guidance for those interested in managing grazing and mule deer on the landscape. They are all available at:

www.muledeerworkinggroup.com. In addition, Chapter 2 "Impacts and Changes to Mule Deer Habitat" in the book produced by the MDWG "*Mule Deer Conservation: issues and management strategies*," provides an overview of grazing and fire effects in mule deer habitat.

PREDATORS: Statements by the NV Wildlife Commission's Mule Deer Restoration Committee:

- *"Mule deer population in Nevada has been found to be very vulnerable to predation throughout its range."*
- *"There is no evidence to show that predation is not a population-limiting factor."*
- *"Predation control is one primary influence on mule deer populations that is the most easily implemented, and is the most effective in the short term."*

WAFWA Mule Deer Working Group Response:

In 2001 the MDWG published a review article in the Wildlife Society Bulletin entitled, *"Deer-predator relationships: a review of recent North American studies with emphasis on mule and black-tailed deer,"* by W. Ballard, D. Lutz, T. W. Keegan, L. H. Carpenter, and J. C. deVos. In that publication, which was awarded Article of the Year in 2002 by The Wildlife Society, the authors reviewed 17 published studies concerning predation on mule deer. They stated a deer population's relationship to habitat carrying capacity was crucial to how it was impacted by predation. In some situations, predation can accelerate a deer population decline or slow its recovery, but widespread predator control on a landscape scale is not biologically effective or cost-efficient. The impact of predators on deer population dynamics must be evaluated on a case by case basis, rather than as wide-sweeping general statements. Chapter 8, "Deer-Predator Relationships" in the MDWG's book *Mule Deer Conservation: Issues and Management Strategies,* concludes, "The relationship between predators and their prey is a very complex issue. The literature we reviewed is equivocal; in some cases, predator control appeared to be useful in improving deer populations and in some cases it was not."

ELK/MULE DEER INTERACTIONS: Statements by the NV Wildlife Commission's Mule Deer Restoration Committee:

- *"In every western scientific study, elk are found to out-compete mule deer."*

WAFWA Mule Deer Working Group Response:

On December 1, 1997 the Wyoming Cooperative Fisheries and Wildlife Research Unit at Laramie, Wyoming published a document entitled *"Potential for Competitive Interactions Between Mule Deer and Elk in the Western United States and Canada: A Review,"* by F.G. Lindzey, W.G. Hepworth, T.A. Mattson, and A.F. Reese. This study, prepared for WAFWA, examined over 480 references including many peer reviewed journal articles, Master's theses, and Ph.D. dissertations. Additionally, knowledgeable biologists from 11 western states and provinces were questioned, all in an effort to determine if elk and mule deer competed for resources. Lindzey and his coauthors concluded, "Observations from states and provinces in our questionnaire provided no consistent trends in populations of the two species, when sympatric, that would suggest a cause-and-effect relationship. Mule deer populations had apparently declined, grown or remained the same in the presence of elk while showing similar trends where

elk were absent or present in only small numbers. Research studies aimed at examining the relationship between deer and elk reported similarly equivocal results." Similarly, Chapter 5, "Elk and Deer Competition" in the MDWG's book *Mule Deer Conservation: Issues and Management Strategies,* concludes, "A broad statement that elk are responsible for mule deer declines is certainly not accurate."

HUNTING SEASONS AND GENETICS: Statements by the NV Wildlife Commission's Mule Deer Restoration Committee:

- *"In the past adequate scientific data has appeared to be flawed and /or lacking to justify some seasons, season lengths, and recommended quotas."*
- *"Hunting during Breeding Season obstructs breeding."*
- *"Pressure on game for multiple seasons causes stress on game."*

WAFWA Mule Deer Working Group Response:

Chapter 4, "Potential Effects of Hunting and Hunt Structure on Mule Deer Abundance and Demographics" in the MDWG's book *Mule Deer Conservation: Issues and Management Strategies,* states the following; "There is no evidence that hunter disturbance affects deer populations through reproductive inhibition or energetic stress." Additionally, the authors also state, "there is no empirical support for the assertion that current hunting practices affect fawn recruitment or genetic diversity of mule deer populations."

Summary

The Nevada document is apparently based on an incomplete review of the scientific literature and unfamiliarity with the successful programs and knowledge base of other WAFWA agencies. The document selectively discredits or ignores well-substantiated scientific principles and adopts unsubstantiated, poorly documented, or completely unsupported ideas. Despite significant supporting scientific literature and data, this document readily dismisses the concept of carrying capacity and the fact that some populations may be limited by the amount and quality of the habitat. The document also supports; "dramatic increases" in grazing of riparian areas and recently burned areas and also advocates "dramatic increases" in the overall grazing intensity of both sheep and cattle in general in the absence of any supporting evidence. In addition, it encourages expensive and generally ineffective practices such as widespread mineral supplementation for deer and widespread predator control. This document speculates on the general concern over coexisting deer and elk, and assumed negative biological impacts of Nevada's hunt structure. Many of these management approaches and ideas are inconsistent with a large body of scientific literature, decades of agency management experience, as well as numerous products the MDWG has produced. In the past 13 years, the MDWG has produced numerous publications that deal directly with the issues outlined in this document. All of this information is widely available to agency deer managers, Boards, Commissions, and other decision makers at: www.muledeerworkinggroup.com.

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