February 28, 2019

Senator Floyd Prozanski, Chair Senate Committee on Judiciary 900 Court St. NE Salem Oregon 97301

## Re: Dr. Robert Wielgus: Statement on use of coyote killing contests for predator control in Oregon

Dear Chairman Prozanski and Members of the Committee:

The use of coyote killing contests for predator control in Oregon is inhumane and ineffective for reducing predation on livestock and game species. The science is unequivocal.

I quote from Oregon Small Farm News, Spring 2018, Using Coyotes to Protect Livestock, Oregon State University Extension Service. "Surprisingly, these researchers found that as more predators are killed, more livestock are killed". "killing coyotes is kind of like mowing the lawn, it stimulates vigorous new growth" via increased reproduction and immigration." "well behaved coyotes can actually prevent livestock losses by defending a territory that may include sheep".

John Shivik, USDA Wildlife Services Scientist, the nation's preeminent researcher on coyote control reported that non-lethal control is much more effective than killing coyotes (Shivik J.A., A Treves, P. Callahan. 2003 Non-lethal techniques for managing predation: primary and secondary repellents. Conservation Biology, 17:1531-37. In his book: The predator paradox, ending the war with wolves, bears, cougars, and coyotes, 2014. Beacon Press, Shivik states "the cost of broad predator control did not provide a return on investment in the form of more deer. No actual increase in deer populations occurs". "Coyote control preferentially removed the "good" coyotes but left the repeat offenders" in livestock depredations. Basically, killing resident coyotes simply results in an influx of even more new coyotes - to quickly take their place, and the new predators are often more likely to prey on livestock.

Ekland et al. 2017 reviewed the scientific literature from 1990 to 2016. I quote "unselective predator removal may reduce livestock losses unless the removed individuals are instantly replaced or represent part of the population that does not kill livestock. In this case predator removal may be completely inefficient". A. Ekland. J.V. Lopez-Bao. 2017. Limited evidence on effectiveness of interventions to reduce livestock predation by large carnivores. Scientific Reports 7, Article number 2097.

Megan Draheim said in Scientific American, May 2017. "why would predation increase after predators are killed? When pack animals such as coyotes are killed, the social structure breaks down. Packs protect territories, so breaking up a pack allows new animals to come in".

Kilgo et al. 2017. said both "immigration and reproduction increase after killing- rendering lethal control ineffective". Reproductive characteristics of a coyote population before and during exploitation. Journal of Wildlife Management, 2017, 81(8): 1386-1393.

In summary, the vast majority of scientific studies have concluded that mass killing of coyotes, such as in killing contests, are not effective in reducing predation on either livestock or game animals.

Dr. Wielgus is former (retired) Professor of Wildlife Ecology and Director of the Large Carnivore Conservation Lab at Washington State University. He obtained his Ph.D. at the University of British Columbia, MS at University of Idaho, and BS at Brandon University. He has studied large predators their interactions with humans, prey, and livestock for over 35 years. He has published over 35 peer reviewed scientific papers on predator/human interactions and is an internationally recognized expert in his field.

## JOURNAL ARTICLES by Dr. Wielgus

- <sup>1,2</sup>Maletzke, B., <sup>1</sup>Kertson, B., Swanson, M., Koehler, G., Beausoleil, R., **Wielgus, R.**, and <sup>1</sup>Cooley, H. 2017. Cougar response to a gradient of human development. Ecosphere. July 2017 volume 8(7), Article e01828.
- Wielgus, R.B. 2017. Resource competition and apparent competition in declining mule deer (*Odocoilus hemionus*). Canadian Journal of Zoology. 95: 499-504.
- <sup>2</sup> Maletzke, B.T., Wielgus, R.B., Pierce, D.J., Martorello, D., and Stinson, D. 2016. A meta-population model to predict occurrence and recovery of wolves. Journal of Wildlife Management. 80 (2): 368-376. DOI: 10.1002/jwmg.1008.
- <sup>1</sup>Keehner, J.N., **Wielgus, R.B**., and, Keehner, A.M. 2015. Effects of male targeted hunting regimes on prey switching by female mountain lions: implications for apparent competition on declining secondary prey. Biological Conservation. 192:101-108.
- <sup>1</sup>Keehner, J.N., **Wielgus, R.B.,** Maletzke, B.T., and Swanson, M.E. 2015. Effects of male targeted harvest regime on sexual segregation in mountain lion. Biological Conservation. 192:42-47.
- Wielgus, R.B. and <sup>2</sup> Peebles, K.A., 2014. Effects of wolf mortality on livestock depredations. PloS One. DOI: 10.1371/journal.pone.0113505.
- <sup>1</sup>Maletzke, B.T., **Wielgus, R.B.,** Koehler, G.M., Swanson, M.E., <sup>2</sup>Cooley, H.S., and Alldredge, J.R. 2014. Effects of hunting on cougar spatial organization. Ecology and Evolution. DOI: 10.1002/ece3.1089.
- <sup>1</sup> Peebles, K.A., **Wielgus, R.B.** <sup>2</sup>Maletzke, B.T., and Swanson, M.E. 2013. Effects of remedial sport hunting on cougar complaints and livestock depredations. PLoS One. 8 (13): e79713.
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- <sup>2</sup> Chapron, G., **Wielgus, R.,** Lambert, A. 2012. Overestimates of maternity and population growth rates in multiannual breeders. European Journal of Wildlife Research. DOI 10.1007/s10344-012-0671-x (Oct 2012).
- <sup>1</sup> White, K.S., Koehler, G.M., .<sup>1</sup> Maletzke, B.T., **Wielgus, R.B**. 2011. Differential prey use by male and female cougars in Washington. Journal of Wildlife Management. 75(5): 1115-1120.

- <sup>2</sup> Chapron, G., **R.B. Wielgus**, P. Quinette, and J. Camarra. 2009. Diagnosing mechanisms of decline and planning for recovery for an endangered brown bear (*Ursus arctos*) population. PLoS ONE. 4(10): e7568.
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