Humane World for Animals

Formerly called the Humane Society of the United States and Humane Society International

Lisa Vest, Hearing Officer
DNREC – Office of the Secretary
89 Kings Highway, Dover, DE 19901

RE: Docket # 2025-R-F-0011 to extend the hunting season for coyotes

September 3, 2025

To the DNREC Division of Fish and Wildlife:

On behalf of our Delaware members and supporters, Humane World for Animals—formerly called the Humane Society of the United States—strongly opposes Docket # 2025-R-F-0011 to extend the hunting season for coyotes to year-round in Delaware.

While this proposed rule claims that its objective is "to better manage this species," the increased killing of coyotes will not reduce their populations, prevent conflicts, or yield more game species for hunters. In fact, the best available science finds that killing more coyotes is counterproductive, because increased persecution disrupts their social structure, which encourages more breeding and migration, and in the end, results in more coyotes.[1] And providing, as the proposed rule states, "increased opportunities for hunters" is not a sufficient reason to increase the killing of a species that provides important ecosystem services and is increasingly valued by the public.

Even more alarming, the proposed rule *strikes the requirement for hunters and trappers to report the coyotes they have killed*. It is difficult to comprehend how eliminating this reporting requirement—which, presumably, provides the department with at least some assessment of how many coyotes are being killed, if not how many are still alive—will fulfill in any way the objective to "better manage" this species.

1. **The year-round killing of coyotes does not reduce their numbers, and could even increase them.**

Since 1850 when mass killings of coyotes began in the U.S., their range has tripled.[2] The science is clear: The persecution of coyotes disrupts their social structure, which encourages more breeding and migration, and ultimately results in more coyotes.[3] In late 2024, new research affirmed this by stating, "These findings expand results from local studies suggesting that directly hunting coyotes does not decrease their abundance and may actually increase it."[4]

In other words: Coyote biologists find that increasing the killing of coyotes will accomplish nothing except to potentially increase the coyote population.

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[1] Randy Comeleo, "Using Coyotes to Protect Livestock. Wait. What?," Oregon State University: OSU Extension Service (June 2018), https://extension.oregonstate.edu/animals-livestock/sheep-goats/using-coyotes-protect-livestock-wait-what

[2] Robert Crabtree and Jennifer Sheldon, "Coyotes and Canid Coexistence in Yellowstone," in *Carnivores in Ecosystems: The Yellowstone Experience*, ed. T. Clark et al.(New Haven [Conn.]: Yale University Press, 1999)

[3] F. F. Knowlton, E. M. Gese, and M. M. Jaeger, "Coyote Depredation Control: An Interface between Biology and Management," Journal of Range Management 52, no. 5 (1999); Robert Crabtree and Jennifer Sheldon, "Coyotes and Canid Coexistence in Yellowstone," in Carnivores in Ecosystems: The Yellowstone Experience, ed. T. Clark et al.(New Haven [Conn.]: Yale University Press, 1999); J. M. Goodrich and S. W. Buskirk, "Control of Abundant Native Vertebrates for Conservation of Endangered Species," Conservation Biology 9, no. 6 (1995).

[4] Moll, R.J., Green, A.M., Allen, M.L. and Kays, R. (2025), People or predators? Comparing habitat-dependent effects of hunting and large carnivores on the abundance of North America's top mesocarnivore. Ecography, 2025: e07390. https://doi.org/10.1111/ecog.07390

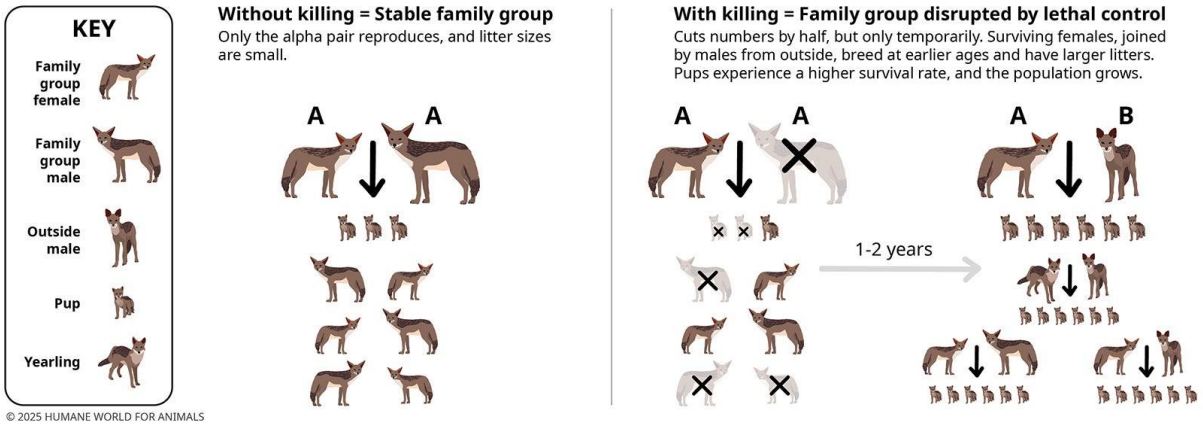
2. **Research finds that the year-round killing of coyotes does not prevent livestock conflicts, and could even exacerbate them.**

Top carnivore scientists and wildlife agencies across the country have found that indiscriminate killing of coyotes can cause their numbers to grow and can escalate conflicts with livestock. The scientific evidence shows that random killing is counterproductive because it disrupts the sensitive coyote pack structure that allows them to self-regulate their populations and their hunting behavior.[5] As lethal control causes coyote populations to expand, coyotes are forced to find larger and easier prey, like sheep, to feed bigger litters of pups.[6] See: *Figure 2*

Further, most coyotes do not prey on livestock; USDA data show that *all carnivores combined* are responsible for less than 0.5% of sheep and cattle losses.[7]

What's more, coyotes are beneficial to farmers and ranchers. They eat rodents and other animals that damage crops and scavenge animal carcasses. Stable coyote packs can even serve as guardian animals that deter other predating animals.[8]

Figure 2



3. **The year-round killing of coyotes, predator control and bounties do not increase populations of game species.**

The best available science demonstrates that killing carnivores to increase ungulate populations is unlikely to produce positive results because the key to ungulate survival is protecting breeding females and ensuring herds have access to adequate nutrition.[9] A 2019 study that evaluated deer hunting

[5] "Using Coyotes to Protect Livestock. Wait. What?," *supra* note 1.
[6] *Id*.; see also, Draheim, Megan. M. "Why Killing Coyotes Doesn't Make Livestock Safer." *Scientific American*, May 31, 2017 at www.scientificamerican.com/article/why-killing-coyotes-doesn-rsquo-t-make-livestock-safer/
[7] "Cattle and Calves Death Loss in the United States Due to Predator and Nonpredator Causes, 2015." USDA–APHIS–VS–CEAH, www.aphis.usda.gov/animal_health/nahms/general/downloads/cattle_calves_deathloss_2015.pdf; "Sheep and Lamb Predator and Nonpredator Death Loss in the United States, 2015," USDA–APHIS–VS–CEAH–NAHMS, www.aphis.usda.gov/animal_health/nahms/sheep/downloads/sheepdeath/SheepDeathLoss2015.pdf
[8] "Using Coyotes to Protect Livestock. Wait. What?," *supra* note 1.
[9] Bishop, C. J., G. C. White, D. J. Freddy, B. E. Watkins, and T. R. Stephenson. 2009. Effect of Enhanced Nutrition on Mule Deer Population Rate of Change. Wildlife Monographs:1-28; Hurley, M. A., J. W. Unsworth, P. Zager, M. Hebblewhite, E. O. Garton, D. M. Montgomery, J. R. Skalski, and C. L. Maycock. 2011. Demographic Response of Mule Deer to Experimental Reduction of Coyotes and Mountain Lions in Southeastern Idaho. Wildlife Monographs:1-33.; Forrester, T. D. and H. U. Wittmer. 2013. A review of the population dynamics of mule deer and black-tailed deer Odocoileus hemionus in North America. Mammal Review 43:292-308.; Monteith, K. L., V. C. Bleich, T. R. Stephenson, B. M. Pierce, M. M. Conner, J. G. Kie, and R. T. Bowyer. 2014. Life-history characteristics of mule deer: Effects of nutrition in a variable environment. Wildlife Monographs 186:1-62.

numbers in six eastern U.S. states found that coyotes are not limiting deer numbers and that coyote removal programs do little to increase deer in the region.[10]

Similarly, in response to concerns by deer hunters about the perceived effect of coyotes on small game populations, the Pennsylvania Game Commission stated, “After decades of using predator control (such as paying bounties) with no effect, and the emergence of wildlife management as a science, the agency finally accepted the reality that predator control does not work,” and that “[predators] don’t compete with our hunters for game. The limiting factor is habitat—we must focus our efforts on habitat.”[11]

The National Wild Turkey Federation states, “Ultimately, the long-term solution to wild turkey populations is not dependent on predator control, but on man’s activities and good habitat management.”[12] Ducks Unlimited adds, “Predator control cannot result in meaningful increases in duck numbers or birds in the bag and threatens to undermine the broad coalition of public support on which modern waterfowl conservation depends.”[13] And the respected hunting organization the Izaak Walton League of America says in its position statement, “The League recognizes the intrinsic value of predatory species and their important ecological roles. … There is no justification for widespread destruction of animals classified as predators … The League opposes payment of bounties on predators or varmints.”[14]

The Mississippi Flyway Council, established in 1952 to coordinate the management of migratory game birds in that region, says, “The Mississippi Flyway Council (MFC) does not support the practice of predator removal as a viable management practice to improve waterfowl recruitment over the long-term or over large geographic areas. The MFC believes that the highest conservation priorities for improving waterfowl recruitment are the landscape-scale wetland and grassland habitat restoration strategies advocated by the North American Waterfowl Management Plan.”[15]

4. **The indiscriminate and random killing of coyotes removes an ecologically important species from the landscape, and can lead to the orphaning and starvation of dependent young.**

Native to the North American continent, coyotes have expanded their range to areas like the northeastern U.S. where wolves and mountain lions were eradicated. Highly intelligent, resourceful, and resilient, coyotes now fill the void left by those top carnivores and are an integral part of healthy ecosystems. By consuming their preferred prey of rodents and rabbits, coyotes help to control disease transmission by curtailing the spread of tick-borne diseases like Lyme[16] or chronic wasting disease.[17] They also clean up carrion, remove sick animals from the gene pool, and protect crops and gardens. They balance their ecosystems and have trophic-cascade effects such as indirectly protecting ground-nesting birds from smaller carnivores and increasing the biological diversity of plant and wildlife communities.[18]

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[10] Eugenia V. Bragina, Roland Kays, Allison Hody, Christopher E. Moorman, Christopher S. Deperno, L. Scott Mills (2019), Effects on white-tailed deer following eastern coyote colonization. Jour. Wild. Mgmt., 83: 916-924. https://doi.org/10.1002/jwmg.21651

[11] Bob Frye. (July 25, 2016). “Habitat, not predators, seen as key to wildlife populations.” *Trib Live*, https://archive.triblive.com/sports/outdoors/habitat-not-predators-seen-as-key-to-wildlife-populations/.

[12] James Earl Kennamer, Ph.D. “Wild Turkeys and Predators.” The National Wild Turkey Federation, August 25, 2021 at www.nwtf.org/content-hub/wild-turkeys-and-predators

[13] Chuck Petrie: “Prairies Under Siege: Ducks, Habitat Conservation & Predators.” Ducks Unlimited Magazine, November/December 2003 at https://duckscdn.blob.core.windows.net/imagescontainer/landing-pages/conservation/conservation-facts/ducks-and-predators-lowres.pdf

[14] The Izaak Walton League of America: “Conservation Policies 2022,” pg. 54 https://www.iwla.org/docs/default-source/about-iwla/2022-policy-book-final.pdf

[15] Resolution by the Technical Section of the Mississippi Flyway Council, February 21, 2003.

[16] Hofmeester TR, Jansen PA, Wijnen HJ, Coipan EC, Fonville M, Prins HHT, Sprong H, van Wieren SE. Cascading effects of predator activity on tick-borne disease risk. Proc Biol Sci. 2017 Jul 26;284(1859):20170453. doi: 10.1098/rspb.2017.0453. PMID: 28724731; PMCID: PMC5543215.

[17] See e.g., Luis E. Escobar et al., "The ecology of chronic wasting disease in wildlife," *Biological Reviews* 95, no. 2 (2020); Gabriel M. Barrile et al., "Chronic wasting disease alters the movement behavior and habitat use of mule deer during clinical stages of infection," *Ecology and Evolution* 14, no. 5 (2024).

[18] S. E. Henke and F. C. Bryant, "Effects of Coyote Removal on the Faunal Community in Western Texas," Journal of Wildlife Management 63, no. 4 (1999); K. R. Crooks and M. E. Soule, "Mesopredator Release and Avifaunal Extinctions in a

Additionally, increasing the killing of coyotes during late spring, as will occur during the year-round season, greatly increases the chance of dependent pups being orphaned, leading to their slow death from starvation. Litters of pups born in the spring in Delaware are still dependent on both parents until weaning and remain under the care and guidance of their parents as they learn to hunt and become independent.

5. **Delaware residents, and most Americans, do not support wildlife killing practices that they find to be inhumane or outdated, or that violate longstanding principles of fairness and respect for the hunted.**

Most Americans do not consider trapping "fair chase" hunting, and scientifically robust surveys of Americans find that many question the ethics of collecting bodies or body parts of wildlife as trophies.[19] While trapping animals and selling their furs and body parts may prove beneficial to one trapper, it harms the public's trust in wildlife management, individual animals, social bonds between animals, and ultimately, ecosystems themselves.

Even the National Shooting Sports Foundation, in a national survey with Responsive Management, found that, while Americans are still supportive of hunting in general, approval varies considerably depending on the stated reason for that hunting. If it's utilitarian in nature, for meat, or to obtain organic or locally sourced food, public approval is very high. But the survey goes on to say, "…approval of hunting drops substantially when the reasons are for the sport, the challenge, or a trophy." There were similarly low approval numbers for motivations for trapping that included to make money, for fur clothing, and for recreation.[20]

Further, researchers find that the American public's attitudes toward historically misunderstood and persecuted species like coyotes have improved dramatically.I In fact, positive attitudes toward coyotes grew by 47 percent between 1978 and 2014, with the majority of respondents expressing positive attitudes toward them.[21]

Americans increasingly care about wildlife. A keystone study, the *America's Wildlife Values* project, has documented a substantial shift in public attitudes away from a traditional view of wildlife (a view of human mastery over wildlife and that wildlife should be managed for human benefit) and toward a mutualist view of wildlife (or the belief that humans and wildlife should coexist and that the welfare of animals is important).[22] That study found that far more Delaware residents hold a mutualist view of wildlife than a traditionalist view. The Association of Fish & Wildlife Agencies and the Wildlife Management Institute have noted these studies and underscored the need for state wildlife management agencies to appeal to a broader constituency to ensure that the agencies remain influential in the future.[23]

Fragmented System," Nature 400, no. 6744 (1999); E. T. Mezquida, S. J. Slater, and C. W. Benkman, "Sage-Grouse and Indirect Interactions: Potential Implications of Coyote Control on Sage-Grouse Populations," Condor 108, no. 4 (2006); N. M. Waser et al., "Coyotes, Deer, and Wildflowers: Diverse Evidence Points to a Trophic Cascade," Naturwissenschaften 101, no. 5 (2014); and Maine Woodland Owners Association, "3 Ways Coyotes Are Good For the Ecosystem" at https://www.mainewoodlandowners.org/articles/3-ways-coyotes-are-good-for-the-ecosystem.

[19] W. F. Andelt et al., "Trapping furbearers: an overview of the biological and social issues surrounding a public policy controversy," Article, *Wildlife Society Bulletin* 27, no. 1 (Spr 1999), <Go to ISI>://000081736800011 ; R. M. Muth et al., "Unnecessary source of pain and suffering or necessary management tool: Attitudes of conservation professionals toward outlawing leghold traps," Article, *Wildlife Society Bulletin* 34, no. 3 (Oct 2006), <Go to ISI>://000242398700020

[20] Responsive Management and the National Shooting Sports Foundation (2019): "Americans' attitudes toward hunting, fishing, sport shooting, and trapping." https://www.fishwildlife.org/application/files/7715/5733/7920/NSSF_2019_Attitudes_Survey_Report.pdf

[21] Kelly A. George, Kristina M. Slagle, Robyn S. Wilson, Steven J. Moeller, Jeremy T. Bruskotter. "Changes in attitudes toward animals in the United States from 1978 to 2014," *Biological Conservation*, Volume 201, 2016. Pages 237-242, ISSN 0006-3207, https://doi.org/10.1016/j.biocon.2016.07.013.

[22] Manfredo, M.J., Sullivan, L., Don Carlos, A.A., Dietsch, A.M., Teel, T.L., Bright, A.D., & Bruskotter, J. 2018). *America's Wildlife Values: The Social Context of Wildlife Management in the U.S.* National report from the research project entitled "America's Wildlife Values." Fort Collins, CO: Colorado State University, Department of Human Dimensions of Natural Resources. https://sites.warnercnr.colostate.edu/wildlifevalues/wp-content/uploads/sites/124/2019/01/AWV-National-Final-Report.pdf

[23] The Association of Fish & Wildlife Agencies and the Wildlife Management Institute: *The Fish and Wildlife Agency Relevance Roadmap (v1.0); Enhanced Conservation Through Broader Engagement*. September 2019 at https://www.fishwildlife.org/application/files/2515/7547/9977/Fish_Wildlife_Relevancy_Roadmap__Final_12-04-19-lowres.pdf

6. **Delaware's wildlife is a public trust asset, and the viewpoints of all state residents should be respected.**

In its *2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, the U.S. Fish and Wildlife Service reported that non-consumptive public land users outnumber and outspend hunters by a wide margin nationwide. Wildlife watchers now outspend hunters by almost 6 to 1 (5.54 to 1) and outnumber hunters 10 to 1.[24]

Delaware's non-consumptive public land users outnumber and outspend hunters and trappers by a wide margin. The National Park Service reports, "In 2023, 126 thousand park visitors spent an estimated $8.5 million in local gateway regions while visiting National Park Service lands in Delaware. These expenditures supported a total of 118 jobs, $4.2 million in labor income, $6.8 million in value added, and $11.7 million in economic output in the Delaware economy."[25]

In 2025, only 1.5% of the state's residents held a paid hunting license.[26] And according to the U.S. Bureau of Economic Analysis in the Dept. of Commerce, outdoor recreation in Delaware generated more than $1.6 billion for the state's economy in 2023. Of that figure, hunting and trapping generated only 0.3%. Spending on other outdoor recreation in Delaware was more than 55 times that amount, and for travel and tourism, more than 154 times.[27] See: *Figure 3*

Figure 3

Outdoor recreation spending in Delaware (2023) From: *U.S. Bureau of Economic Analysis*		
Sample activities	Spending (in thousands of dollars)	% of total
Hunting and trapping	4,319	0.3
RVing	46,130	2.86
Other outdoor recreation[28]	238,332	14.8
Travel and tourism	665,346	41.3
Total Outdoor Recreation	1,610,473	100.00

For all of the reasons stated above, we ask that you reject the proposal in Docket # 2025-R-F-0011 that would extend the hunting season for coyotes to year-round and eliminate the reporting requirements for coyote hunters and trappers in Delaware.

Respectfully submitted,

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[24] U.S. Department of the Interior, U.S. Fish and Wildlife Service (Sep. 2023), *2022 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. https://www.fws.gov/media/2022-national-survey-fishing-hunting-and-wildlife-associated-recreation*
[25] National Park Service, "2023 National Park Service Vistor Spending Effects Report," https://www.nps.gov/subjects/socialscience/vse.htm.
[26] The U.S. Fish and Wildlife Service: Hunting Licenses, Holders, and Costs by Apportionment Year https://us-east-1.quicksight.aws.amazon.com/sn/accounts/329180516311/dashboards/48b2aa9c-43a9-4ea6-887e-5465bd70140b
[27] U.S. Bureau of Economic Analysis, "SAOACTVA Outdoor recreation satellite account activities - value added [1]" (accessed Wednesday, September 3, 2025).
[28] The BEA defines this as amusement/water parks, festivals, sporting events, concerts, field sports, golfing and tennis.