## March 1, 2024

Ms. Shannon Estenoz Assistant Secretary for Fish and Wildlife & Parks U.S. Department of the Interior Federal Rulemaking Portal

## Re: Banning predator control across America's National Wildlife Refuges

Dear Assistant Secretary Estenoz:

The 137 undersigned groups are pleased to submit these comments in support of the proposed rule, *National Wildlife Refuge System; Biological Integrity, Diversity, and Environmental Health* (89 FR 7345), insofar as banning *predator control* on these special federal public lands is concerned to "ensure that the biological integrity, diversity, and environmental health (BIDEH) of the National Wildlife Refuge System (Refuge System) are maintained, and where appropriate, restored and enhanced, in accordance with the National Wildlife Refuge System Improvement Act of 1997."

The U.S. Fish and Wildlife Service's (Service's) goal for the rule is to manage the Refuge System to address "longstanding and contemporary conservation challenges" in order to "protect vulnerable species, restore and connect habitats, promote natural processes, sustain vital ecological functions, increase resilience, and adapt to climate change."<sup>1</sup> We agree that the twin threats of the *extinction crisis*, which unduly affects native carnivores,<sup>2</sup> and the *climate crisis*,<sup>3</sup> which has severely exacerbated wildfires<sup>4</sup> and extreme floods,<sup>5</sup> affect planetary biological diversity<sup>6</sup> and make this rule not only timely but of the utmost importance during the Anthropocene.

We laud the Service's proposal to ban predator control ostensibly to grow ungulate (e.g., deer, elk, moose, pronghorn and caribou) populations as it is unsupported by the best available science.<sup>7</sup> Predator control results in the losses of numerous native carnivores,<sup>8</sup> whose behaviors are needed both for trophic cascades<sup>9</sup> and for containing chronic wasting disease<sup>10</sup> and other maladies. Moreover, by modulating prey populations large carnivores reduce deadly vehicle collisions that are so costly to society.<sup>11</sup>

Finally, many predator control methods cause stress and pain to target animals, disturb and kill non-target wildlife, and are counter to longstanding principles of sportsmanship. Most Americans (including most hunters) do not support the use of methods that are not considered "fair chase" hunting.<sup>12</sup> Therefore, we conclude the following methods have no place on America's Refuge System:

**Traps are notoriously indiscriminate and cause harm.** Villeneuve and Proulx (2022) attempted to quantify the hidden domain of domestic dogs and cats captured by traps in Canada.<sup>13</sup> They found that the majority of companion animal captures occur near urban settings, on trails and in winter,<sup>14</sup> and that governmental bodies "prefer to keep pertinent data sets [of captured pets] undisclosed."<sup>15</sup> Lamb et al. (2022) demonstrated that meso-carnivore (e.g., pine marten) traps cause brown bears to suffer amputation of digits or even whole paws.<sup>16</sup> In Wyoming, recent incidents involved federally protected brown bears caught in wolf traps, including a trail camera image of a brown bear whose paw was sheared off, apparently by a neck snare set out for wolves.

In their review of Conibear<sup>TM</sup> traps and neck snares, Proulx and Rodtka (2019) found that these so-called "kill traps" often fail to humanely kill animals.<sup>17</sup> Restraining traps and poorly set "kill" traps hold animals until the trapper comes to kill the animal.<sup>18</sup> Likewise, wolves caught in neck snares suffer because their heavily muscled necks do not allow snares to quickly collapse their tracheas. This can result in what trappers call "jellyhead," which is "an extreme case of edema due to watery fluid collecting in the tissues of the cervical region," causing wolves to suffer for days or even weeks before they die.<sup>19</sup> Bears, especially young individuals, suffer immensely when captured in snares as they struggle vigorously to escape.<sup>20</sup> Trapped animals experience pain, shock and dehydration until they are killed.<sup>21</sup> Injuries include broken limbs, broken teeth, dislocated shoulders, hemorrhage, claw removal, tendon or ligament lacerations, fractures, joint dislocation, amputation of digits and/or limbs, physiological stress and or pain, dehydration, and exposure to weather.<sup>22</sup> Finally, trappers are typically concerned with undamaged pelts, but not quick and or humane deaths.<sup>23</sup>

Hounding bears, cougars and other wildlife is highly problematic and has no place on the Refuge System. Hounding harms non-target species, including deer, ground-nesting birds and domestic farm animals. Hounding results in deaths, injuries and disturbance to federally protected species (e.g., Mexican wolves), young of the year (including kittens, kits, pups and cubs), and results in fights between the hounds and their quarry—causing injury or death to either.<sup>24</sup> Chasing wildlife with hounds can result in heat exhaustion for both hounds and the wildlife they pursue. Dogs may even chase their quarry into roadways, where oncoming vehicles could strike either. Hounds invariably create strife between hunters and landowners as hounding dogs frequently trespass onto private property.<sup>25</sup> Hunting hounds have even attacked humans, farm animals, and companion animals.

**Baiting wildlife can result in dangers to both humans and wildlife and has no place on the Refuge System**. Experts agree that baiting bears (or other species) invariably increases dangerous human-bear conflicts. Allowing baiting on national wildlife refuges put recreationists and nearby residents into danger,<sup>26</sup> aggregates animals resulting in the spread of disease between bears and other species,<sup>27</sup> increases predation of smaller bears by larger bears, creates vexing health risks to many wildlife because of spoilage (e.g., rotting meats), toxicity (e.g., theobromine and caffeine), and baits with unnatural high sugar and fat content (that increases cellular aging and tooth decay).<sup>28</sup> Bait sites make meso-carnivores such as mustelids and coyotes reliant on these sites for preying upon microfauna, which can create an ecological trap for species at the lower trophic levels.<sup>29</sup>

**Aerial gunning on National Wildlife Refuges for predator control should cease.** Aerial gunning operations, frequently aimed at coyotes and wolves, are extremely risky and dangerous for flight crews. We have documented dozens of accidents and incidents involving individuals or states or USDA-Wildlife Services staff during aerial gunning operations for predator control. Crews flying helicopters and airplanes incur multiple accidents because of inattention such as flying into land formations or power lines and poles, or by flying too low and at slow speeds while doubling back into their aircrafts' own wind turbulence. These accidents and incidents involve dozens of serious and even fatal injuries. Moreover, conducting aerial gunning operations for feral animals (e.g., wild pigs), rather than allowing native carnivores to conduct their natural predation or by using fertility controls, is short sighted. Aircraft overflights also disturb multiple species.<sup>30</sup>

The current social science indicates that wildlife, and native carnivores in particular, are highly valued by society.<sup>31</sup> America's native carnivores should be permitted to live unmolested on our nation's Refuge System. Rather than killing fields, our wildlife refuges should be a place where wildlife like bears, cougars, wolves and smaller carnivores can roam freely without exploitation, where these wildlife can find mates and raise their young without the constant specter of death or disturbance by human hands.<sup>32</sup> These lands should instead operate as valuable linkages between subpopulations increasing genetic diversity, fitness and resilience. In short, America's Refuge System must be a place of true "biological integrity, diversity and environmental health."

## We heartily endorse the rule's provisions to ban *predator control* across America's Refuge System, with two important caveats:

First, the rule must also prohibit predator control for protecting cattle, sheep and other farmed animals who live and graze on the Refuge System. Millions of wildlife, particularly native carnivores, are killed annually in the purported service of protecting these domestic animals.<sup>33</sup> This excessive and random killing of wildlife, especially native carnivores, including raptors,<sup>34</sup> is neither cost effective nor efficacious.<sup>35</sup> Excessive carnivore killing for the purpose of protecting domestic livestock contravenes the purpose of the rule, "to ensure that the biological integrity, diversity, and environmental health" of America's Refuge System is maintained.

Second, the Service's proposed rule cannot prioritize both "wildlife-dependent recreational opportunities" and "biological integrity, diversity, and environmental health." The goal of the former contradicts the purpose of the latter, particularly where trappers and hunters of native carnivores are concerned. Native carnivore trappers and hunters are extraordinarily lethal, and have caused the extirpation of many species including Mexican wolves, wolverines, Canada lynx, ocelots, jaguarundi, kit foxes, swift foxes, gray foxes, fishers, pine martens, jaguars and others across these species' historic ranges. Recreational carnivore hunters – particularly trappers – harm myriad species with their widespread indiscriminate devices. Therefore, the Service's paramount aim with the rule should be to make America's Refuge System just that: a *refuge* for wildlife by prohibiting the hunting and trapping of native carnivores.

In conclusion, and for all the above reasons, the undersigned groups urge the Service to quickly adopt the proposed rule banning predator control on America's Refuge System. We urge that the definition of predator control include carnivore-killing activities conducted ostensibly to protect domestic farm animals who live on these refuges, and that the predator control ban include recreational hunting and trapping of native carnivores—because these recreational activities are lethal to individuals and populations, harming the purpose of the proposed rule.

Thank you for your urgent attention to this important proposed rule.

Sincerely yours,

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<sup>&</sup>lt;sup>1</sup> National Wildlife Refuge System; Biological Integrity, Diversity, and Environmental Health. Vol. 89, p. 7345. Feb. 2, 2024. https://www.federalregister.gov/documents/2024/02/02/2024-02076/national-wildlife-refuge-system-biological-integritydiversity-and-environmental-health

<sup>&</sup>lt;sup>2</sup> J. A. Estes et al., "Trophic Downgrading of Planet Earth," *Science* 333, no. 6040 (2011); Chris T. Darimont et al., "The Unique Ecology of Human Predators," ibid.349, no. 6250 (2015); William J. Ripple et al., "Saving the World's Terrestrial Megafauna," *BioScience* (2016); William J. Ripple et al., "Extinction Risk Is Most Acute for the World's Largest and Smallest Vertebrates," *Proceedings of the National Academy of Sciences* 114, no. 40 (2017); Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), "Nature's Dangerous Decline 'Unprecedented' Species Extinction Rates 'Accelerating': Current Global Response Insufficient. 'Transformative Changes' Needed to Restore and Protect Nature; Opposition from Vested Interests Can Be Overcome for Public Good. Most Comprehensive Assessment of Its Kind; 1,000,000 Species Threatened with Extinction," news release, 2019.

<sup>&</sup>lt;sup>3</sup> Intergovernmental Panel on Climate Change, "Climate Change 2023: Synthesis Report: Summary for Policymakers," (2023).

<sup>&</sup>lt;sup>4</sup> L. T. Kelly et al., "Fire and Biodiversity in the Anthropocene," *Science* 370, no. 6519 (2020).

<sup>&</sup>lt;sup>5</sup> D. L. Swain et al., "Increased Flood Exposure Due to Climate Change and Population Growth in the United States," *Earth's Future* 8, no. 11 (2020).

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<sup>7</sup> See, e.g., T. J. Clark and Mark Hebblewhite, "Predator Control May Not Increase Ungulate Populations in the Future: A Formal Meta-Analysis," *Journal of Applied Ecology* 58, no. 4 (2021).

<sup>8</sup> See: e.g., Kira A Cassidy et al., "Human-Caused Mortality Triggers Pack Instability in Gray Wolves," *Frontiers in Ecology and the Environment* (2023); S. C. Frank et al., "Indirect Effects of Bear Hunting: A Review from Scandinavia," *Ursus* 28, no. 2 (2017); R. B. Wielgus et al., "Effects of Male Trophy Hunting on Female Carnivore Population Growth and Persistence," *Biological Conservation* 167 (2013); D. C. Norton et al., "Female American Black Bears Do Not Alter Space Use or Movements to Reduce Infanticide Risk," *PLoS One* 13, no. 9 (2018).

<sup>9</sup> Douglas W. Smith, Peterson O. Rolf, and Douglas B. Houston, "Yellowstone after Wolves," *Bioscience* 53, no. 4 (2003); Remington J. Moll et al., "An Apex Carnivore's Life History Mediates a Predator Cascade," *Oecologia* 196, no. 1 (2021); L. Mark Elbroch et al., "Vertebrate Diversity Benefiting from Carrion Provided by Pumas and Other Subordinate, Apex Felids," *Biological Conservation* 215 (2017); Michelle Peziol et al., "Large Carnivore Foraging Contributes to Heterogeneity in Nutrient Cycling," *Landscape Ecology* 38, no. 6 (2023).

<sup>10</sup> Ellen E. Brandell et al., "Examination of the Interaction between Age-Specific Predation and Chronic Disease in the Greater Yellowstone Ecosystem," *Journal of Animal Ecology* (2022); Luis E. Escobar et al., "The Ecology of Chronic Wasting Disease in Wildlife," *Biological Reviews* 95, no. 2 (2020).

<sup>11</sup> Sophie L. Gilbert et al., "Socioeconomic Benefits of Large Carnivore Recolonization through Reduced Wildlife-Vehicle Collisions," *Conservation Letters* 10 (2017); Jennifer L. Raynor, Corbett A. Grainger, and Dominic P. Parker, "Wolves Make Roadways Safer, Generating Large Economic Returns to Predator Conservation," *Proceedings of the National Academy of Sciences* 118, no. 22 (2021); U.S. Department of Transportation, "Wildlife-Vehicle Reduction Study: Report to Congress," *https://www.fhwa.dot.gov/publications/research/safety/08034/08034.pdf* (2008).

<sup>12</sup> See: e.g., J. Posewitz, *Beyond Fair Chase: The Ethic and Tradition of Hunting* (Helena, Montana: Falcon Press, 1994).
<sup>13</sup> Kimberly A. Villeneuve and Gilbert Proulx, "Impact of Wild Mammal Trapping on Dogs and Cats: A Search into an Unmindful and Undisclosed World," in *Mammal Trapping: Wildlife Management, Animal Welfare and International Standards*, ed. G. Proulx (Alpha Wildlife Publication, 2022).

<sup>14</sup> Ibid.

<sup>15</sup> Ibid., p. 141.

<sup>16</sup> Clayton Lamb et al., "Considerations for Furbearer Trapping Regulations to Prevent Grizzly Bear Toe Amputation and Injury," *Wildlife Society Bulletin* (2022).

<sup>17</sup> G. Proulx and D. Rodtka, "Killing Traps and Snares in North America: The Need for Stricter Checking Time Periods," *Animals* 9, no. 8 (2019).

<sup>18</sup> G. Iossa, C. D. Soulsbury, and S. Harris, "Mammal Trapping: A Review of Animal Welfare Standards of Killing and Restraining Traps," *Animal Welfare* 16, no. 3 (2007).

<sup>19</sup> G. Proulx et al., "Humaneness and Selectivity of Killing Neck Snares Used to Capture Canids in Canada: A Review," *Canadian Wildlife Biology and Management* 4, no. 1 (2015).

<sup>20</sup> M. Cattet et al., "An Evaluation of Long-Term Capture Effects in Ursids: Implications for Wildlife Welfare and Research," *Journal of Mammalogy* 89, no. 4 (2008); R.A. Powell, "Evaluating Welfare of American Black Bears (*Ursus Americanus*) Captured in Foot Snare and in Winter Dens," ibid.86 (2005).

<sup>21</sup> Cattet et al., "An Evaluation of Long-Term Capture Effects in Ursids: Implications for Wildlife Welfare and Research."; Proulx et al., "Humaneness and Selectivity of Killing Neck Snares Used to Capture Canids in Canada: A Review."; Iossa, Soulsbury, and Harris, "Mammal Trapping: A Review of Animal Welfare Standards of Killing and Restraining Traps."; Powell, "Evaluating Welfare of American Black Bears (*Ursus Americanus*) Captured in Foot Snare and in Winter Dens."

<sup>22</sup> Cattet et al., "An Evaluation of Long-Term Capture Effects in Ursids: Implications for Wildlife Welfare and Research."; Iossa, Soulsbury, and Harris, "Mammal Trapping: A Review of Animal Welfare Standards of Killing and Restraining Traps."; Powell, "Evaluating Welfare of American Black Bears (*Ursus Americanus*) Captured in Foot Snare and in Winter Dens."

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Comprehensive Review of the Ecological and Human Social Effects of Artificial Feeding and Baiting of Wildlife."; Inslerman et al., "Baiting and Supplemental Feeding of Game Wildlife Species. The Wildlife Society.."; Rebecca Kirby et al., "The

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<sup>29</sup> "Consumption of Intentional Food Subsidies by a Hunted Carnivore."

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<sup>32</sup> Gosia Bryja, "Shattered Minds: Trauma Scarring the Lives of Black Bears," in *Medium* (2024).

<sup>33</sup> Bradley J. Bergstrom et al., "License to Kill: Reforming Federal Wildlife Control to Restore Biodiversity and Ecosystem Function," *Conservation Letters* http://onlinelibrary.wiley.com/doi/10.1111/conl.12045/abstract (2013).

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