



February 27, 2024

**Via Regulations.Gov (FWS-HQ-NWRS-2022-0106)**

Katherine Harrigan  
Public Comments Processing  
U.S. Fish and Wildlife Service  
5275 Leesburg Pike, MS:PRB (JAO/3W)  
Falls Church, VA 22041-3803

Re: National Wildlife Refuge System; Biological Integrity, Diversity, and Environmental Health

Dear Ms. Harrigan,

Friends of Animals (FoA)<sup>1</sup> submits this comment on the Proposed Rule published on February 2, 2024, regarding the National Wildlife Refuge System (Refuge System).<sup>2</sup> In general, FoA believes that the regulation changes in the Proposed Rule comply with existing statutes and support a more robust Refuge System that can truly act as a refuge for wildlife. However, FoA urges the U.S. Fish and Wildlife Service (FWS) to strengthen the Proposed Rule and to close loopholes that contradict the intended statutory purposes of the Refuge System.

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<sup>1</sup> FoA is an international animal rights organization incorporated in the state of New York since 1957 with roughly 200,000 members worldwide. FoA and its members seek to free animals from cruelty and exploitation around the world and to promote a respectful view of non-human animals, both free-living and domestic. FoA's activities include educating its members on current threats to many species' abilities to live in ecosystems free from human manipulation, exploitation, and abuse; and monitoring federal agency actions to ensure that laws enacted to protect the environment and wildlife are properly implemented.

<sup>2</sup> National Wildlife Refuge System; Biological Integrity, Diversity, and Environmental Health, 89 Fed. Reg. 7345 (Feb 2, 2024).

## LEGAL BACKGROUND

### A. The National Wildlife Refuge System Administration Act

Congress passed the National Wildlife Refuge System Administration Act in 1966.<sup>3</sup> Congress later amended this act with the National Wildlife Refuge System Improvement Act (the Act) of 1997.<sup>4</sup>

As amended, the Act declares that the mission of the Refuge System is to “administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources” for “the benefit of present and future generations of Americans.”<sup>5</sup> In FWS’s own words, the Refuge System exists “primarily to safeguard wildlife populations through habitat preservation.”<sup>6</sup>

The Refuge System comprises more than 560 different refuges across the country, and “provides some of the best wildlife viewing opportunities on Earth.”<sup>7</sup> More than 850 million acres are included in the Refuge System.<sup>8</sup>

FWS must ensure that the biological integrity, diversity, and environmental health (“BIDEH”) of the Refuge System continue to be maintained in perpetuity.<sup>9</sup>

### B. The Proposed Rule

The Proposed Rule deals primarily with the BIDEH mandate of the Act and proposes several new regulations at 50 C.F.R. § 29.3.

#### 1. Policy Statement

First, the Proposed Rule provides an overarching statement describing what it means for FWS to ensure that BIDEH continues to exist and thrive in the Refuge System.<sup>10</sup> Ensuring BIDEH means to “conserve refuge ecosystems and all their components,” to “promote natural processes,” and to “address ecological transformation caused by climate change and other anthropogenic change.”<sup>11</sup> FWS seeks to achieve this BIDEH by focusing on “diverse,

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<sup>3</sup> 16 U.S.C. § 668dd-668ee.

<sup>4</sup> *Id.*; U.S. Fish & Wildlife Service, *National Wildlife Refuge System Improvement Act*, <https://www.fws.gov/law/national-wildlife-refuge-system-improvement-act>.

<sup>5</sup> 16 U.S.C. § 668dd(a)(2).

<sup>6</sup> U.S. Fish & Wildlife Service, *Why Hunting is Allowed on National Wildlife Refuges*, <https://fws.gov/story/why-hunting-allowed-refuges>.

<sup>7</sup> U.S. Fish & Wildlife Service, *National Wildlife Refuge System*, <https://www.fws.gov/program/national-wildlife-refuge-system>.

<sup>8</sup> 89 Fed. Reg. 7345.

<sup>9</sup> 16 U.S.C. § 668dd(a)(4)(B).

<sup>10</sup> 89 Fed. Reg. at 7350.

<sup>11</sup> *Id.*

functioning, and self-sustaining ecosystems that are resilient to emerging or future conditions.”<sup>12</sup> FWS stated that it must ensure that any refuge management does not diminish BIDEH of the Refuge System “for the benefit of fish and wildlife conservation.”<sup>13</sup>

## 2. New Definitions

Next, FWS proposes a series of definitions that it will use in this new policy of ensuring BIDEH. These definitions include, among others, “biological integrity,” “environmental change,” “invasive species,” “diversity,” “natural processes,” and “predator control.”

The Proposed Rule defines “biological integrity” as “the capacity of an ecological system to support and maintain a *full range of biotic composition*, structure, function, and processes over time that exhibit diversity, connectivity, and resilience at genetic, organism, population, and community levels.”<sup>14</sup>

The Proposed Rule defines “predator control” as “actions or programs with the intent or potential to alter predator-prey population dynamics on a refuge by reducing a population of native predators through lethal or nonlethal methods.”<sup>15</sup> However, the Proposed Rule still allows for predator control when FWS deems it “necessary to meet statutory requirements, fulfill refuge purposes, or ensure [BIDEH].”<sup>16</sup> Furthermore, the Proposed Rule states that FWS does not even consider any of the following actions to *be* predator control: 1) “[a]gency removal of native predator(s) solely to protect public health and safety,” 2) “[c]ompatible, refuge-approved taking of fish and wildlife for subsistence uses,” 3) “[c]ompatible, refuge-approved recreational hunting and fishing opportunities,” or 4) “[r]emoval of invasive species.”<sup>17</sup>

The Proposed Rule defines “natural processes” as “interactions among plants, animals, and the environment that occur without substantial human influence.”<sup>18</sup>

## 3. Overall Policy Directives

The Proposed Rule also provides overall policy directives that refuge managers should use as a framework to ensure BIDEH when implementing management activities. These five directives are: 1) Address climate change, 2) Conserve and connect habitat, 3) Manage fish

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<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> 89 Fed. Reg. at 7351 (emphasis added).

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> 89 Fed. Reg. at 7352.

<sup>18</sup> 89 Fed. Reg. at 7351.

& wildlife populations, 4) Uphold water rights, and 5) Promote and maintain healthy soil, water, and air.<sup>19</sup>

#### 4. Specific Management Activity Guidance

The Proposed Rule gives more specific guidance for management activities which FWS believes are relevant to BIDEH. Some of this guidance is more germane to FoA's interests than others. For example, guidance 1 describes predator control. FWS intends to generally prohibit predator control with the regulations in the Proposed Rule. The Proposed Rule states that FWS may only implement lethal predator control "when all other feasible methods have been fully evaluated and such control is considered the only practical means" of ensuring BIDEH. Importantly, however, FWS has exempted certain actions from even being considered predator control, including recreational hunting and fishing opportunities that do not compromise BIDEH. That is, FWS prohibits predator control, but will continue to allow the recreational killing of predators.

Another relevant specific guidance in the Proposed Rule relates to pesticide use. In general, FWS proposes to allow the use of pesticides as part of an integrated pest management plan.<sup>20</sup> Such use of pesticides must be "necessary" to ensure BIDEH in a refuge. The Proposed Rule also states that any use of pesticide "must not result in adverse effects on populations of nontarget species."<sup>21</sup>

### ARGUMENT

#### A. FoA agrees with the broader goals of the Proposed Rule, and FWS could further support those goals by restricting hunting in the Refuge System.

Both FWS explanatory material and the Proposed Rule itself correctly emphasize BIDEH and the need to "support conservation."<sup>22</sup> The Proposed Rule states that the Refuge System is vital to "addressing the dual threats of biodiversity loss and climate change."<sup>23</sup> The Proposed Rule even states that the BIDEH mandate is "one of the most fundamental mandates in the laws governing the Refuge System."<sup>24</sup>

The Proposed Rule does not discuss or mention that the majority of refuges authorize recreational killing of wildlife. In fact, the only instance of the word "hunting" in the entire Federal Register post, including both specific regulation proposals and six pages of

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<sup>19</sup> 89 Fed. Reg. at 7351.

<sup>20</sup> 89 Fed. Reg. at 7352.

<sup>21</sup> *Id.*

<sup>22</sup> 89 Fed. Reg. at 7345.

<sup>23</sup> *See generally* 89 Fed. Reg. 7345.

<sup>24</sup> 89 Fed. Reg. at 7346.

explanatory material, shows up where FWS explains that it does not consider “recreational hunting” to be a form of predator control.<sup>25</sup>

Simply put, the idea of allowing the recreational killing of wildlife is completely inimical to the idea of a wildlife *refuge*.

The statutory language of the Act itself states that refuges shall serve as “areas for the protection and conservation of fish and wildlife” and that refuges should act as a “national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats.”<sup>26</sup> The Act states that wildlife-dependent recreation, often a euphemism for killing wildlife, should only be allowed when “compatible,” yet FWS often focuses on this instead of maintaining refuges as actual refuges for wildlife.

This is evidenced in FWS’s continued expansion of recreational killing opportunities over the past decade. No fewer than eight times in the past ten years has FWS expanded these opportunities, while exerting no such similar efforts to encourage non-violent recreation or allow “natural processes” to take hold in the refuge.<sup>27</sup>

The Proposed Rule opines that FWS should, whenever possible, “promote natural processes” to uphold and ensure BIDEH in the Refuge System. There is nothing natural about humans using 21<sup>st</sup>-century technology to kill animals for fun in what amounts to a federally sponsored hunting ranch. Nor does such recreational killing contribute to actual biological integrity, diversity, or environmental health. FWS should use this opportunity to shift focus and prioritize the health of the environment and the wildlife who seek refuge in the Refuge System.

**B. FWS should strengthen the Proposed Rule by closing loopholes and ensuring that predators remain a natural part of the biological diversity and environmental health of the Refuge System.**

FoA supports the Proposed Rule’s general statement that “[FWS] prohibit[s] predator control unless. . . .”<sup>28</sup> FWS *should* prohibit predator control for numerous reasons, including the fact that predators are a natural part of an ecosystem, and that they bring numerous benefits in fulfilling that role. However, FoA is concerned that the Proposed Rule makes

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<sup>25</sup> 89 Fed. Reg. at 7351-52.

<sup>26</sup> 16 U.S.C. § 688dd(a)(1), (2).

<sup>27</sup> FWS expanded hunting opportunities in 2014 (79 Fed. Reg. 14809), 2016 (81 Fed. Reg. 68874), 2018 (83 Fed. Reg. 45758), 2019 (84 Fed. Reg. 47640), 2020 (85 Fed. Reg. 54076), 2021 (86 Fed. Reg. 48822), 2022 (87 Fed. Reg. 35136), and 2023 (88 Fed. Reg. 41058).

<sup>28</sup> 89 Fed. Reg. at 7351.

numerous exceptions that will still allow for predator control actions and will be inconsistent with the mission and mandates of the Act.

**1. FWS should modify the Proposed Rule to eliminate large loopholes that allow for predator control.**

As mentioned above, the Proposed Rule explicitly states that FWS does not consider “recreational hunting and fishing opportunities” as a form of predator control.<sup>29</sup> That is, killing predators does not qualify as predator control. Visitors may still enter refuges and kill predators for fun. This undermines the mandate to ensure BIDEH.

On top of this, the Proposed Rule will still allow predator control when the agency itself deems it “necessary” and “practical” to do so.<sup>30</sup> These words, left undefined in the Proposed Rule, allow for FWS to determine at any point in the future that predator control is in their best interest, or even worse, the best interest of a small group of individuals who enjoy killing wildlife for fun. Predator control should not be allowed simply because it is more convenient for those who engage in recreational killing. Predators, engaging in their natural behavior which they require to survive and thrive, should not be viewed as competing with the recreational killing crowd. Allowing this violates the Act by not taking the habitat and population of predators into consideration.

**2. Predators are a natural part of any ecosystem, and their presence conforms to the purported values promoted in the Proposed Rule.**

One of the main reasons why FWS has promulgated the Proposed Rule, and the statutory authority behind the Proposed Rule, is the Act’s BIDEH mandate.<sup>31</sup> FWS must ensure that the BIDEH of the Refuge System is maintained for present and future generations of Americans.

As natural members of any ecosystem, predators *do* promote biological diversity and environmental health. Predators contribute to healthy environments in many ways, including stabilizing climate and preventing zoonotic diseases from spreading.<sup>32</sup> Plants, including those specifically protected within the Refuge System, can prevail in part because predators hold herbivores in check.<sup>33</sup> Multiple experiments have emphasized that removing predators can wreak havoc on the environment.<sup>34</sup> Some of the most common predators in

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<sup>29</sup> 89 Fed. Reg. at 7352.

<sup>30</sup> 89 Fed. Reg. at 7351.

<sup>31</sup> 89 Fed. Reg. at 7345, 7350.

<sup>32</sup> Yale Environment 360, *The Crucial Role of Predators: A New Perspective on Ecology* (Sep. 15, 2011), [https://e360.yale.edu/features/the\\_crucial\\_role\\_of\\_predators\\_a\\_new\\_perspective\\_on\\_ecology](https://e360.yale.edu/features/the_crucial_role_of_predators_a_new_perspective_on_ecology).

<sup>33</sup> *Id.*

<sup>34</sup> See, e.g., National Geographic, *Role of Keystone Species in an Ecosystem*, <https://education.nationalgeographic.org/resource/role-keystone-species-ecosystem> (discussing sea star as a predator); Hughes et al., *Top-predator recovery abates geomorphic decline of a coastal ecosystem*, 626 *Nature* 111 (2024)

North America, including bears, cougars, coyotes, and wolves, are all important parts of the interrelated ecosystem where they exist, and contribute positively to the overall environmental health.<sup>35</sup>

The Proposed Rule, in both regulatory text and justifications, seeks to “promote natural processes.”<sup>36</sup> Predators *are* a natural part of the ecosystem, and FWS should rely on their existence to accomplish its goals. Animal populations naturally stay in check in part due to predators, as they have done for hundreds of millions of years. For example, predators can help keep chronic wasting disease to a minimum, as predators tend to target sick and vulnerable animals who suffer from this disease.<sup>37</sup>

FWS should ensure that the desire to recreationally kill animals for fun does not override this innate part of an ecosystem and should instead rely on the “natural processes” it ostensibly seeks to promote.

### **3. Maintaining predators within the Refuge System conforms to FWS’s statutory mandate to help ensure biological diversity and environmental health.**

As mentioned above, predators contribute positively to the ecosystems in which they reside. To promote BIDEH and “natural processes,” FWS should prevent predator control whenever possible.

The scientific literature is crystal clear that maintaining predator presences works to achieve precisely what FWS seeks to accomplish: biological diversity, integrity, and environmental health.

Doing so would also be in line with the statutory purposes behind the Refuge System. Instead of acting as the largest federally sponsored hunting ground, the Refuge System could live up to its statutory purpose as a place to conserve wildlife and their habitat.

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(discussing sea otter as a predator); Terborgh et al., *Trophic Cascades: Predators, Prey, and the Changing Dynamics of Nature*, 51 Integrative and Comparative Biology 644 (Nov. 8, 2010) (book with 21 chapters discussing different cases of top-down predator effects).

<sup>35</sup> Todd Wilkinson, *The Undeniable Value of Wolves, Bears, Lions and Coyotes in Battling Disease* (Dec. 11, 2017), <https://mountainjournal.org/predators-and-chronic-wasting-disease>; Geoffrey Mohan, *Decline of Earth’s top carnivore species damages broader ecosystems* (Jan 10, 2014), <https://www.latimes.com/science/sciencenow/la-sci-sn-predator-decline-ecosystems-20140110-story.html>; Beschta et al., *Large Predators and trophic cascades in terrestrial ecosystems on the western United States*, 142 Biological Conservation 2401 (Nov. 2009); Bump et al., *Predator interactions, mesopredator release and biodiversity conservation*, 12 Ecology Letters 982 (June 2009).

<sup>36</sup> 89 Fed. Reg. at 7345, 7347, 7348, 7350, 7351, 7352.

<sup>37</sup> Krumm et al., *Mountain lions prey selectively on prion-infected mule deer*, 6 Biology Letters 209 (2010); Wild et al., *The Role of Predation in Disease Control: A Comparison of Selective and Non-Selective Removal on Prion Disease in Deer*, 47 Journal of Wildlife Diseases 78 (Jan. 1, 2011).



#### 4. Predator control is cruel and ineffective in reaching its goals.

The Proposed Rule outlines when FWS will enact predator control and makes numerous exceptions as to what FWS does *not* consider predator control. However, it does not state what FWS, and the federal agencies hired to implement these actions, *do* consider part of predator control.

Trapping, one of the most common forms of predator control, leaves animals to languish and slowly die when they are caught.<sup>38</sup> While suffering from horrific injuries, animals struggle immensely to get out of the traps. Traps will also ensnare any animal who happens to walk over them, not just target predators.

Using hounds to chase after animals also presents several concerns.<sup>39</sup> This practice negatively impacts several non-target species, the hounds themselves, and even humans.<sup>40</sup> Hounding often results in long chases between the hounds and the target prey, leaving the animal exhausted and dehydrated.

Another form of predator control, aerial gunning, also results in cruelty towards innocent predators who live out their natural behaviors. Shooting predators from a helicopter does not always result in a quick death, leaving animals to slowly bleed out while hiding from the helicopter. Perhaps unsurprisingly, the noise from helicopters and rifles negatively impacts several species beyond the target predator.<sup>41</sup>

On top of all of this needless and wanton cruelty inflicted on predators, multiple studies have shown that predator control, particularly lethal control, is not even that effective.<sup>42</sup> One reason is that predators will often reproduce more in response to a lower population number, leading to entirely ineffective killing practices.<sup>43</sup> Thus, the predator control activities that the Proposed Rule allows will inflict immense cruelty on animals within the Refuge System without actually accomplishing any purported goals.

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<sup>38</sup> Proulx et al, *Veterinarians and Wildlife Biologists Should Join Forces to End Inhumane Mammal Trapping Technology*, 11 *World Veterinary Journal* 317 (Sept. 25, 2021).

<sup>39</sup> Mori et al, *Porcupines in the Landscape of Fear: Effect of Hunting with Dogs on the Behaviour of a Non-Target Species*, 62 *Mammal Research* 251 (2017).

<sup>40</sup> Treves et al, *Adverse effects of hunting with hounds on participating animals and human bystanders*, <https://www.biorxiv.org/content/10.1101/2022.08.16.504031v4> (preprint).

<sup>41</sup> Pepper et al., *A Review of the Effects of Aircraft Noise on Wildlife and Humans, Current Control Mechanisms, and the Need for Further Study*, 32 *Environmental Management* 418 (Nov. 12, 2003).

<sup>42</sup> Khorozyan et al, *A framework of most effective practices in protecting human assets from predators*, 24 *Human Dimensions of Wildlife* 380 (May 30, 2019).

<sup>43</sup> Treves et al., *Predator control should not be a shot in the dark*, 14 *Frontiers in Ecology and the Environment* 380 (Sept. 1, 2016).



### C. FWS should prevent the use of pesticides altogether in the Refuge System.

The Proposed Rule states that FWS “may allow the use of pesticides.”<sup>44</sup> FWS should not allow any such use for multiple reasons. First, allowing the use of pesticides would violate FWS’s statutory mandate to “provide for the conservation of fish, wildlife, and plants, and their habitats.”<sup>45</sup> This is because, by their very nature, pesticides will contribute to the destruction and degradation of the environment and wildlife.<sup>46</sup> A short-term reduction of a given target species cannot justify the long-term impact upon the environment.

Pesticides are also extremely harmful to human health and could affect the visitors who travel within the Refuge System.<sup>47</sup> The dangers for wildlife are just as bad. Furthermore, the harm from pesticides will never stop at the target species. Bioaccumulation occurs with pesticides, where animals or plants absorb pesticides and the harmful compounds begin to accumulate within an individual organism.<sup>48</sup> This means that, when a pesticide targets a plant or animal, it is all but certain that nontarget species will be negatively impacted. For example, predators such as eagles can consume animals who themselves have been impacted by pesticides, either directly or by having eaten plants affected by herbicides.<sup>49</sup> All of this can affect both biodiversity and environmental health, in direct conflict with FWS’ statutory mandate of ensuring BIDEH.

Lastly, the use of pesticides contradicts the Proposed Rule’s directive #5, “promote and maintain healthy soil, water, and air.” Soil environments and the microorganisms therein can be affected by pesticides just as much as larger biota.<sup>50</sup> Waterways are particularly sensitive to toxic pesticides, and through runoff and leeching, can often find their way into

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<sup>44</sup> 89 Fed. Reg. at 7352.

<sup>45</sup> 16 U.S.C. § 668dd(4)(A).

<sup>46</sup> Scientific American, *Pesticides Are Spreading Toxic ‘Forever Chemicals,’ Scientists Warn* (June 15, 2022), <https://www.scientificamerican.com/article/pesticides-are-spreading-toxic-forever-chemicals-scientists-warn/>.

<sup>47</sup> U.S. Environmental Protection Agency, *Human Health Issues Related to Pesticides*, <https://www.epa.gov/pesticide-science-and-assessing-pesticide-risks/human-health-issues-related-pesticides>.

<sup>48</sup> Zijian Li, *Spatiotemporal pattern models for bioaccumulation of pesticides in common herbaceous and woody plants*, 276 *Journal of Environmental Management* 111334 (Dec. 15, 2020); Ray et al., *Bioaccumulation of pesticides in fish resulting toxicities in humans through food chain and forensic aspects*, 3 *Environmental Analysis Health and Toxicology* 38 (Aug. 28, 2023).

<sup>49</sup> U.S. Environmental Protection Agency, *What Killed the Eagles? EPA Researchers Help Solve 25+ Year Mystery*, <https://www.epa.gov/sciencematters/what-killed-eagles-epa-researchers-help-solve-25-year-mystery> (June 1, 2021); Audubon Magazine, *This Brutal Pesticide Creates a ‘Circle of Death.’ So Why Is It Making a Comeback?*, <https://www.audubon.org/magazine/spring-2020/this-brutal-pesticide-creates-circle-death-so-why> (Spring 2020);

<sup>50</sup> Gunstone et al., *Pesticides and Soil Invertebrates: A Hazard Assessment*, 9 *Frontiers in Environmental Science* 643847 (2021).

those waterways.<sup>51</sup> These may even affect areas outside a given refuge, as watersheds do not match up with refuge boundaries. This means that not only should FWS be concerned with the effects of pesticides within the Refuge System, but it must also take greater measures to ensure its actions do not impact the land outside the Refuge System.

## CONCLUSION

In closing, while FoA supports the general direction and emphasis on BIDEH that the Proposed Rule contains, we are concerned for several reasons. The Proposed Rule continues to allow hunting of animals, which directly contrasts against the purpose of the Refuge System, and even the statutory mandate of BIDEH. Predator control remains a loophole in the Proposed Rule. While the Proposed Rules purports to abstain from predator control, in reality, such activities are still entirely possible within the bounds of the Proposed Rule. Lastly, the use of pesticides should not be allowed at all. Such a destructive practice, which threatens plants, animals, and humans beyond the target species, should not be allowed in the Refuge System.

Sincerely,

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<sup>51</sup> Liess et al., *Pesticides are the dominant stressors for vulnerable insects in lowland streams*, 201 Water Research 117262 (Aug. 1, 2021); Maggi et al., *Agricultural pesticide land budget and river discharge to oceans*, 620 Nature 1013 (2023).