



November 15, 2019

Washington Department of Fish and Wildlife  
PO Box 43200  
Olympia, WA 98504

**RE: WESTERN STATES CARNIVORE ALLIANCE SCOPING COMMENTS ON  
WASHINGTON DEPARTMENT OF FISH AND WILDLIFE WOLF POST-RECOVERY  
PLAN**

Western States Carnivore Alliance (“WSCA”) is an alliance formed in 2019 comprised of eight conservation organizations. WSCA focuses on the intersection of science, policy, law and advocacy to promote the recovery of the gray wolf and other carnivores throughout the western states. Because the presence of the gray wolf and other carnivores are critical to the health and functionality of ecosystems, we support restoration of all native carnivores, including the gray wolf, to sustainable, ecologically effective populations throughout their historic range. WSCA works to promote the recovery of the gray wolf by advocating for policies, regulations and agency actions which prioritize wildlife protection and recovery, and which ensure the use of best available science in making wildlife management decisions in the state of Washington and throughout the West.

We submit the following comments on behalf of WSCA regarding the Washington Department of Fish and Wildlife’s (“Department”) solicitation for scoping comments on the Wolf Post-Recovery Plan for Washington State. Our comments address three main topic areas:

- **The Prematurity of Developing a Post-Delisting Plan**
- **Treatment of the Current Wolf Conservation and Management Plan**
- **Recommendations for Inclusion in a Post-State-Delisting Plan**

The remainder of this letter elaborates on each of these three topics.

**I. Undertaking a Post-Delisting Plan Process is Premature**

WSCA has serious concerns about the Department’s decision to undergo a SEPA process for a post-state-delisting wolf plan at this time. Washington’s wolf population has not reached the low recovery goals set forth in the 2011 Wolf Conservation and Management Plan (the “Plan”), and

for reasons we describe below, it is likely not on track to meet those recovery goals by 2021, as was projected by the Plan. Conducting scoping for a new plan now is premature and threatens to usurp financial and staff resources and energy which are necessary to find solutions to current wolf management problems in the state.

The Plan provides two different routes for wolves to reach recovery goals and in turn be considered for statewide delisting. The first requires 15 successful breeding pairs throughout the state for three consecutive years, with four of the pairs in each of the three recovery zones and three additional pairs anywhere in the state; the second avenue requires 18 successful breeding pairs throughout the state for one year, with four of the pairs in each of the three recovery zones and six additional pairs anywhere in the state.<sup>1</sup>

Wolves have not come close to meeting the Plan's recovery objectives. Of the three identified recovery zones, objectives have been met in only one zone. The second zone has some wolves present, but recovery objectives have not been met there, and the third zone has no confirmed wolves at all.

Furthermore, the Plan's recovery objectives for down-listing and delisting are not based on best available science, are biologically indefensible and are insufficient for ensuring the reestablishment of a self-sustaining population of gray wolves in Washington. Review of the Plan prior to its adoption in 2011 included a blind peer review by four scientists, three of whom found the Plan's recovery objectives to be severely compromised and with minimum numbers too low to meet many scientific standards of sustainability and genetic viability.<sup>2</sup> Rather than drafting a post-state-delisting plan, the existing Plan should be revisited, its science and other aspects should be updated, and the recovery objectives revised to reflect a wolf population of sufficient size to ensure sustainability and genetic viability well into the future.

In any wolf population in the early stages of recovery, significant increases in annual population growth are commonly observed, with available territory and an available wild ungulate prey base providing fodder for newly-establishing wolves. As territories become full and the wolf population regulates its numbers through inter-pack strife and/or availability of prey, annual population growth generally begins to level off. However, at any stage of recovery other factors, such as disease, overzealous lethal removal of wolves by agency actions and illegal killing of wolves by poachers, can dampen population growth. Wolf populations in the early stages of recovery may be particularly vulnerable.

In Washington, there is cause for concern that at least two of these factors – agency kill actions and wolf poaching – are having an effect on the annual growth rate of the state's wolf population. The increasing number of wolves killed annually by livestock operators or their agents while wolves are alleged to be attacking livestock may also be a contributing factor.<sup>3</sup>

---

<sup>1</sup> Wiles, G.J., Allen, H.L. and G. E. Hayes, 2011. Wolf Conservation and Management Plan. Washington Department of Fish and Wildlife, Wildlife Program at pg. 9.

<sup>2</sup> Peer Review Reports of Draft Wolf Conservation and Management Plan for Washington – Alternative 2. Preferred Alternative, by three blind peer reviewers and an Associate Editor. January 26, 2010.

<sup>3</sup> Wolves killed by livestock operators or their agents amounted to two wolves in 2017, none reported in 2018 and three wolves in 2019 to date. No reports were made of wolves killed for allegedly attacking

While the Department constantly advises the public, the Washington Fish and Wildlife Commission and the media that the wolf population has grown on average by 28 percent per year, a closer examination of annual growth rate reveals a concerning pattern of extreme variation and potential stagnation. Per the Department’s 2018 annual wolf report, from 2008 (when the first breeding pair/pack was confirmed) through 2018, the overall confirmed wolf population has grown from 5 wolves to 126. In the early years of 2008 to 2012, annual growth rate was 180, 36, 84 and 46 percent, respectively. In 2014 through 2016, the annual growth rates were 31, 32 and 28 percent. But there have been three years in which annual growth rate was almost nonexistent. There was only two percent growth in 2013, six percent growth in 2017, and three percent growth in 2018. (Table 1.)

**Table 1. Annual growth of Washington wolf population 2008-2018. Annual wolf counts obtained from Washington Department of Fish and Wildlife annual wolf reports.**

---

<b>Year</b>	<b>Wolf Population</b>	<b>Annual Growth</b>
2008	5	
2009	14	180%
2010	19	36%
2011	35	84%
2012	51	46%
2013	52	2%
2014	68	31%
2015	90	32%
2016	115	28%
2017	122	6%
2018	126	3%

---

These figures are noteworthy and raise concern because: (1) each of those years of negligible population growth followed a year in which the Department killed a significant number of

---

livestock prior to 2017. These killings began only after the Department’s full pack removal of the Profanity Peak pack in 2016, followed by the Department’s destruction of the Sherman pack, and additional lethal removals of members of the Togo, Smackout and OPT packs. The Departmental wolf-killing actions have potentially sent a signal to the general public that wolves are not valuable and can be killed instead of pursuing nonlethal measures to halt conflicts. This public response to agency killing of wolves is discussed in Chapron, G. and A. Treves, 2016. Blood does not buy goodwill: allowing culling increases poaching of a large carnivore. Proc. R. Soc. B 283. 20152939.

wolves; (2) published scientific literature has indicated an association between agency killing of wolves with a higher inclination of members of the public to illegally kill wolves and with increased wolf poaching<sup>4</sup>; and (3) Idaho, the adjacent source population for wolves to migrate into Washington, has, since 2011, been killing a significant number of wolves via state-sanctioned hunting and trapping seasons as well as agency kill actions on wolves, and this may have resulted in significantly fewer wolves available to disperse in to Washington. In Washington, killing of wolves by the Department in response to conflicts with livestock is likely to increase with any potential decreased protections, both state and federal.<sup>5</sup> This raises concerns about the future of wolf recovery in Washington and highlights the fact that the Department is undergoing a post-delisting planning effort without exploring the effects of kill operations on growth rates and understanding how those kill operations affect the wolf population and the ability to meet recovery goals.

Pack sizes in Washington consist of far fewer animals than assumed in the modeling studies done for the Plan. Appendices G and H of the Plan describe the development of wolf population models for RAMAS© GIS analysis by the Department and provide the assumptions/parameters used for the modeling studies.<sup>6</sup> Average pack size in Washington was assumed to be eight individuals.<sup>7</sup> According to the information in the Department’s annual wolf reports for years 2011-2018, however, pack sizes in Washington are comprised of considerably fewer animals than the model assumed. (Table 2.):

**Table 2. Average pack size of wolf packs in Washington 2011-2018. Pack sizes obtained from Washington Department of Fish and Wildlife annual wolf reports.**

---

<u>Year</u>	<u>Average Pack Size</u>
2011	5.4
2012	5.6
2013	3.8
2014	3.7
2015	4.4
2016	5.1
2017	4.8 +/- 2.6
2018	“Most packs contained 3 to 5 individuals”

---

<sup>4</sup> Chapron and Treves, 2016, *supra*.

<sup>5</sup> 128 Independent Scientists’ Comment Letter to US Fish and Wildlife Service Opposing Proposed Federal Rule to Delist Wolves. June 25, 2019, at page 2.

<sup>6</sup> Plan at pp. 265-279.

<sup>7</sup> Plan at p. 277. This modeling study was subsequently published in a peer-reviewed journal, *See* Maletzke, B.T., Wielgus, R.B., Pierce, D.J., Martorello, D.A. and D.W. Stinson, 2016. A Meta-Population Model to Predict Occurrence and Recovery of Wolves. *The Journal of Wildlife Management* 80(2): 368-376.

While the Plan predicts reaching its recovery objectives in 2021 (based on an average pack size of 8 animals), a recent paper concludes that with Washington's much smaller pack sizes and limited recovery to date, if population growth continues at the current trend it will take at least 55 years to reach the Plan's recovery objectives.<sup>8</sup>

Small pack sizes affect not only the timeline for reaching the Plan's recovery objectives but also likely affects the ability of these packs to hunt large wild ungulates because there are not enough wolves in the pack to reliably or safely take down animals such as elk. As a result, wolves may turn to killing smaller, or slower, easier-to-hunt animals like cattle. Thus, small pack sizes may have repercussions for the number and/or frequency of conflicts between livestock and wolves in Washington. The Department should be looking into why pack sizes in Washington remain small and should consider Washington's small pack sizes when revisiting recovery objectives under the Plan, as well as how pack size may be influencing the conflicts with livestock.

Long term viability for the Washington wolf population also depends on the health and recovery of populations in neighboring locations. Washington's recolonizing wolf population depends on immigration from wolf populations inhabiting Idaho, Oregon and British Columbia. Thus, the biological status, viability and protections afforded to wolves in these neighboring populations must be considered when determining the long-term health and viability of Washington's wolves. Given the current circumstances facing wolves in these locations, there is cause for significant concern.

**In Idaho, the following factors may impede the state continuing to serve as a source population for Washington:**

- Since federal delisting in 2011, Idaho's state-sanctioned wolf hunting and trapping seasons has resulted in the killing of more than 1,747 wolves as of June 20, 2017, the last date the Idaho Department of Fish and Wildlife provided wolf harvest tallies on its website. In the two years since that time it is likely at least another 200-375 wolves have been killed each year, given records from previous years.<sup>9</sup> It is thus possible that as many as 2,147 – 2,497 have been killed there to date. These figures do not include the number of wolves killed in Idaho annually for livestock conflicts.
- For the past five years the Idaho legislature has annually provided \$400,000 of general funds designated to a wolf control board to be used expressly for killing wolves, and the law establishing the board and fund was just extended indefinitely this year.<sup>10</sup>

---

<sup>8</sup> Wielgus, R.B., 2019. Wolf Delisting and Recovery in the Pacific Northwest. Scientific report for Western Environmental Law Center at page 11.

<sup>9</sup> Idaho Department of Fish and Game figures posted on its website for 2011-2017 indicated the following wolf harvests: 379 wolves (2011-2012); 319 wolves (2012-2013); 302 wolves (2013-2014); 250 wolves (2014-2015); 271 wolves (2015-2016); 226 wolves (2016-2017).

<sup>10</sup> Betsy Russell, *Bill to make wolf control board permanent heads to governor*. Idaho Press, Feb. 18, 2019. Available at: [https://www.idahopress.com/eyeonboise/bill-to-make-wolf-control-board-permanent-heads-to-governor/article\\_7b7f73fb-e96c-5b03-bd55-3d16eb0aacfa.html](https://www.idahopress.com/eyeonboise/bill-to-make-wolf-control-board-permanent-heads-to-governor/article_7b7f73fb-e96c-5b03-bd55-3d16eb0aacfa.html).

- This year, the Idaho Department of Fish and Wildlife contributed more than \$23,000 to a bounty program being run by a private organization, Foundation for Fish and Wildlife, which pays \$1,000 bounties to trappers for each wolf trapped and killed.<sup>11</sup>

**In Oregon, the following factors may impede the state from continuing to be a source population for Washington:**

- Prior to federal delisting in Idaho, Oregon, like Washington, began to develop a wolf population due to wolves dispersing westward from Idaho. Initially, the Oregon wolf population was increasing at a rate of around 50 percent per year.<sup>12</sup>
- Following federal delisting in Idaho, Oregon’s annual wolf population growth declined to around 21 percent, and in 2016, 2017 and 2018, the annual growth in Oregon’s wolf population was at only 1.81 percent, 11 percent and 10 percent respectively, an average geometric growth rate of six percent per year.<sup>13</sup>

**In British Columbia, the following factors may impede this Canadian province from continuing to be a source population for Washington:**

- The provincial government is proposing a predator cull that would kill more than 80 percent of the wolf population in parts of central British Columbia, as part of the province’s efforts to save endangered caribou herds.<sup>14</sup>

Wolf recovery in Washington should not be determined solely based on a numerical goal – which blind peer reviewers of the Plan called out for being far too low and scientifically indefensible -- but must consider as well, in assessing long-term viability of the population, such factors as pack size, reliance on immigration from connected populations and what effect pack size and a dwindling of immigrants has on the genetics of Washington’s wolves.

It is simply too early to focus on state-delisting when so many factors point instead to assessing the current threats to Washington’s wolf population and its prospects for full recovery to a sustainable and ecologically effective population. We urge the Department to instead allot its valuable staff-time, funding and other resources to address the current, pressing issue of livestock-wolf conflict. The primary Department focus should be to research innovative solutions to help abate the ongoing livestock-wolf conflicts while significantly reducing the killing of state-endangered wolves.

We realize that regardless of our urging the Department to cease its premature efforts to create a post-state-delisting plan, the Department will likely continue to proceed on its intended path. We therefore provide comments below regarding key issues a post-state-delisting plan should address.

---

<sup>11</sup> Amanda Peacher, *State of Idaho Funds Controversial Wolf Bounty Program*. Boise State Public Radio, Mar. 28, 2019. Available at: <https://www.boisestatepublicradio.org/post/state-idaho-funds-controversial-wolf-bounty-program#stream/0>.

<sup>12</sup> Wielgus, 2019, *supra*.

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

<sup>14</sup> Randy Shore, *B.C. predator cull would target 80 percent of wolves in caribou recovery area*. Vancouver Sun, Sept. 12, 2019. Available at: <https://vancouversun.com/news/local-news/b-c-predator-cull-would-target-80-per-cent-of-wolves-in-caribou-recovery-areas>

## II. The Current Plan Should be Corrected, Updated and Used as the Foundation for the Post-State-Delisting Plan

The 2011 Wolf Plan is an important and useful framework for wolf recovery and management in Washington. The Plan is scientifically robust and at the time of its inception contained current, up-to-date science on the issues it covers. Today, most of the information in the Plan is still relevant and useful. We hope the Department does not plan to scrap the 2011 Plan and start over, and strongly urge against such action. The Department should focus the bulk of its efforts on retaining the current Plan, but update the science; delete concepts and statements which no longer are supported by science; update sections with information now developed and known from on-the-ground experience in Washington since the Plan's adoption; and update the Plan with scientific findings on topics that were not included in the 2011 Plan yet are now accepted by the scientific community as relevant for wolf recovery, conservation and management. We provide, below, several changes we think necessary to ensure the Plan contains best available science and is fully up-to-date.

### a. The Science in the 2011 Plan Must be Updated to Reflect Best Available Science

#### i. Recovery Objectives

The recovery objectives for the gray wolf in Washington must be updated to reflect best available science and consider the multitude of factors affecting wolf recovery in the state. Three of the four blind peer reviewers of the 2011 Plan noted that the recovery objectives/numbers resulted in a compromised Plan, with some reviewers characterizing them as the result of “groupthink”, a “compromise of science and public acceptance” and noting “[t]his is inconsistent with how recovery objectives should be developed.”<sup>15</sup> One reviewer recommended to “task a scientific group to devise a plan to reestablish a self-sustaining population of wolves and simultaneously charge a different group to devise a plan to foster social tolerance and reduce conflicts between *that biologically defensible number of wolves* and people.”<sup>16</sup> We think there is wisdom in this recommendation, though we also urge full public involvement as part of the second group's charge.

#### ii. Livestock-Wolf Conflicts and Deterrence Measures

The science relating to wolf-livestock conflict must be updated in the 2011 Plan. The Plan must include current best available science which reflects new understanding on the use and effectiveness of non-lethal conflict deterrents and of lethal control of wolves as a means to resolve such conflicts. The emerging science is concluding that killing wolves is the wrong approach to deterring conflicts. It can result in the remaining wolves moving to neighboring ranches and having conflicts with livestock there.<sup>17</sup> There are currently no scientific studies that

---

<sup>15</sup> Peer Review Reports, *supra*.

<sup>16</sup> *Id.* (emphasis added).

<sup>17</sup> Santiago-Avila, F.J., Cornman, F.A., Treves, A., 2013. Killing wolves to prevent predation on livestock may protect one farm but harm neighbors. PLoS ONE 13(1): e0189729. Available at: <https://doi.org/10.1371/journal.pone.0189729>.

have been conducted according to “gold” scientific standards that test the hypothesis that killing wolves prevents livestock-wolf conflict.<sup>18</sup> However, the Department continues to tout as fact in its public outreach and internal and external advisory groups, that killing wolves is an effective means to deter conflicts with livestock. For instance, during meetings open to the public the Department repeatedly has mentioned the need to meet a 14-day window post predation event to “change pack behavior” when killing wolves. In making this assertion, the Department relies on a 2015 study which retrospectively analyzed the killing of wolves for livestock conflicts over a 20-year period in the northern Rocky Mountains wolf population.<sup>19</sup> Yet that study in fact concluded that killing wolves beyond 14 days of a conflict with livestock has no different effect than if no wolves are killed at all, and if wolves are killed within seven days of the conflict there is practically no difference either.<sup>20</sup>

Studies which concluded that killing entire wolf packs stopped conflicts either fail to mention – or specifically note – that once terrain is filled by a new pack in subsequent years the conflicts begin again.<sup>21</sup> This suggests that killing entire packs is a very short-term solution to a problem which deserves much more innovative thinking and long-term results.

Furthermore, studies published since the 2011 Plan’s adoption have compared the use of lethal and non-lethal deterrents in preventing livestock-wolf conflict and found that non-lethal deterrents are not only more effective at preventing conflict but are also more cost-efficient in the long term.<sup>22</sup> A recent paper which analyzed the results of 140 different studies worldwide concluded that the only methods which have scientifically been shown to deter conflicts between

---

<sup>18</sup> Treves, A., Krofel, M. and McManus, J., 2016. Predator control should not be a shot in the dark. *Front. Ecol. Environ.* 14(7): 380-388.

<sup>19</sup> Bradley, E.H., Robinson, H.S., Bangs, E.E., Kunkel, K., Jimenez, M.D., Gude, J.A. and Grimm, T., 2015. Effects of wolf removal on livestock depredation recurrence and recovery in Montana, Idaho and Wyoming. *The Journal of Wildlife Management*; DOI: 10.1002/jwmg 948.

<sup>20</sup> *Id.*

<sup>21</sup> Bradley et al, 2015, *supra*; Musiani, M., Muhly, T., Gates, C.C., Callaghan, C., Smith, M.E., and E. Tosoni, 2005. Seasonality and reoccurrence of depredation and wolf control in western North America. *Wildlife Society Bulletin.* 33(3): 876-887; Muhly, T., Gates, C.C., and M. Musiani, 2010. Livestock husbandry practices reduce depredation risk in Alberta, Canada. *In The World of Wolves. New Perspectives on Ecology, Behavior and Management.* Eds Marco Musiani, Luigi Boitani and Paul C. Paquet. 398 pp. at pages 261-286.

<sup>22</sup> McManus, J.S., Dickman, A.J., Gaynor, D., Smuts, B.H., and D.W. Macdonald, 2014. Dead or alive? Comparing costs and benefits of lethal and non-lethal human-wildlife conflict mitigation on livestock farms. *Fauna and Flora International, Oryx*, Page 1 of 9. Doi:10.1017/S0030605313001610; Imbert, C., Caniglia, R., Fabbri, E., Milanesi, P., Randi, E., Serafini, M., Torretta, E., and A. Meriggi, 2016. Why do wolves eat livestock? Factors influencing wolf diet in northern Italy. *Biological Conservation* 195: 156-168.



livestock and wolves are nonlethal methods.<sup>23</sup> Specifically, the paper found that fencing, guard dogs and fladry were effective.<sup>24</sup>

### iii. Social Tolerance

The 2011 Plan's information regarding the impacts killing wolves has on social tolerance needs updating by inclusion of published, peer-reviewed science on this subject. The Plan indicates it may be necessary to kill problem wolves that "[j]eopardize public tolerance for overall wolf recovery."<sup>25</sup> And, over the past several years the Department, when killing wolves for livestock conflicts, has publicly asserted its kill action was necessary to maintain social tolerance for coexisting with wolves. In fact, many wildlife agencies make the same claim and have done so for years despite the fact no studies had been conducted to test that assertion. Since the Plan's publication, multiple studies on the topic have been published, however, and conclude that the opposite is true. The studies demonstrate that killing wolves is associated with reduced social tolerance for wolves, an increased inclination to poach wolves and actual increased poaching of wolves.<sup>26</sup> As these studies show, this is the case whether the killing is done as an agency action for livestock conflicts or if the killing is done by members of the public through state-sanctioned hunting and trapping seasons on wolves.

### iv. Effects of Killing Wolves on Wolf Packs

Best available science on the impacts of killing wolves on wolf social structure must also be included. While the current Plan cites, on page 81, to a study published in 2008 which strongly cautions against the use of lethal removal of wolves in the early stages of recovery and provides specific guidance to limit this management action in a recolonizing wolf population, the Department has largely dismissed the paper's counsel.<sup>27</sup> Specifically, the Department has repeatedly ignored the recommendations of *Brainerd et al.* to limit killing to solitary individuals or territorial pairs, not killing wolves in packs with pups six months old or younger, and not

---

<sup>23</sup> van Eeden, L.M., Ann Eklund, A., Miller, J.R.B., Lopez-Bao, J.V., Chapron, G., Cejtin, M.R., Crowther, M.S., Dickman, C.R., Frank, J., Krofel, M., Macdonald, D.W., Manus, J., Meyer, T.K., Middleton, A.D., Newsome, T.M., Ripple, W.J., Ritchie, E.G., Schmitz, O.J., Stoner, K.J., Tourani, M. and A. Treves, 2018. Carnivore conservation needs evidence-based livestock protection. *PLoS Biol* 16(9): e2005577.

<sup>24</sup> van Eeden et. al., 2018, *supra*.

<sup>25</sup> Plan at p. 80.

<sup>26</sup> Browne-Nunez, C., Treves, A., MacFarland, D., Voyles, Z. and C. Turng, 2015. Tolerance of wolves in Wisconsin: A mixed-methods of policy effects on attitudes and behavioral inclinations. *Biological Conservation* 189:59-71; Chapron and Treves, 2016, *supra*; Laaksonen, M., Sánchez Molina, F., Anttilainen, M., Blomqvist, J., Halminen, N., Kopteff, G., Levi, S., Nyysolä-Kiisla, M., Säynevirta, S. and P. Klemola, 2018. Keeping the wolf from the door. Analysis of derogation-based wolf hunting permits in Finland. *Luonto-Liiton* at p. 28; Treves, A. and J. Bruskotter, 2014. Tolerance for Predatory Wildlife. *Science* 344, 476.

<sup>27</sup> Brainerd, S.M., Andre', H., Bangs, E.E., Bradley, E.H., Fontaine, J.A., Hall, W., Iliopoulos, Y., Jimenez, M.D., Jozwiak, E.A., Liberg, O., Mack, C.M., Meier, T.J., Niemeyer, C.C., Pedersen, H.C., Sand, H.K., Schultz, R.N., Smith, D.W., Wabakken, P. and A.P. Wydeven, 2008. The effects of breeder loss on wolves. *The Journal of Wildlife Management* 72(1): 89-98.

killing wolves from packs unless the pack has at least six members three or more of which are adults or yearlings. The Brainerd paper is no longer the sole published paper on this topic; there is additional peer-reviewed literature on this subject and the Department should include these additional studies in the Plan and pay heed to the authors' conclusions. For example, some studies have shown that when the pack's breeding members are killed this can cause packs to split up or dissolve entirely, which reduces the chance of both reproduction and pup survival.<sup>28</sup> Other published studies examine wolf pack social structure, the roles and skills possessed by individual pack members which help the family unit thrive as a whole, and the fact that, if not killed by humans and if left unexploited, wolf packs have a tendency to evolve into multi-generational family units which remain stable and hold territory more successfully.<sup>29</sup> Both the current Plan and any future Plan are intended to both manage and conserve wolves. Conservation of any species requires knowledge about what circumstances allow that species to thrive. The science on the effects of killing wolves on wolf pack social structure, reproduction, pup survivorship, hunting success and maintaining territory should be included as part of a wolf conservation plan.

#### v. Wolf-Ungulate Interaction

The Plan also needs to reflect new information -- and where gaps exist -- in understanding of wolf-ungulate interactions in Washington. The Department has continuously stated at Wolf Advisory Group meetings, Commission committee meetings and Commission meetings themselves that there is no comprehensive information regarding ungulate numbers or wide-ranging studies on the effects of wolves on ungulate populations within Washington state. The fact that the Department does not have complete information about the health of Washington's wild ungulate populations is of major concern to conservation groups as well as to hunters. This is missing information crucial not only for its relevance to wolf recovery, but also for social tolerance by hunters to coexist with wolves. The message the Department frequently receives from hunters is that wolves are decimating ungulate populations and affecting hunting in the state. However, the science from other states seems to refute this perception. It is vital that the Department provide as much information as possible regarding what is known about Washington's wild ungulate populations in order to understand the health of those populations and if interaction with wolves is having any effects on those populations.

Since the adoption of the current Plan in 2011, on-the-ground data has been collected and analyzed to understand effects of wolf presence on wild ungulates in Washington. In 2016, the Department published a report containing two years of study results assessing the effects on Washington's wild ungulates of a multi-predator system. The report analyzed the effects of

---

<sup>28</sup> Borg, B.L., Brainerd, S.M., Meier, T.J. and L.R. Prugh, 2014. Impacts of breeder loss on social structure, reproduction and population growth in a social canid. *Journal of Animal Ecology*. doi: 10.1111/1365-2656.12256; Ausband, D.E., Mitchell, M.S. and L.P. Waits, 2017. Effects of breeder turnover and harvest on group composition and recruitment in a social carnivore. *Journal of Animal Ecology* 1-8. DOI: 10.1111/1365-2656.12707; Ausband, D.E., Stansbury, C.R., Stenglein, J.L., Struthers, J.L. and L.P. Waits, 2015. Recruitment in a social carnivore before and after harvest. *Animal Conservation*. Print ISSN 1367-9430. 9 pp.

<sup>29</sup> Ordiz et. al. Saving large carnivores, but losing the apex predator?, 2013. *Biological Conservation* 168, 128-133.

wolves, black bear, cougar and coyote (but not lynx or grizzly bear since the presence of these species is so minimal). Its conclusion was that although some limitations of some of the data might preclude the ability to detect impacts of predation on a specific ungulate population, “none of the ungulate populations in this assessment appear to show clear signs of being limited by predation.”<sup>30</sup> These findings should be included in the Plan.

Perhaps even more insightful is the data from the northern Rockies, where gray wolf populations have been present for nearly 25 years since federal reintroductions of the species there in 1995-1996. The three-state northern Rockies recovery region currently has a wolf population approximately 12 times that of Washington and hunters in Montana, Wyoming and Idaho make claims similar to claims made by Washington hunters, *i.e.*, that wolves there are decimating ungulate populations. Yet data from the northern Rockies for ungulate management units and for hunter harvest and hunter success rate show the claims are wrong.

State wildlife agencies in all three northern Rockies states have, since 2012, been proclaiming banner years for elk numbers and hunter harvest success rates:

- 
- In Idaho, an August 27, 2018 press release issued by the state Department of Fish and Game declared that “most of Idaho’s elk herds and harvests have been at or near historic highs in recent years and well above long-term averages.”<sup>31</sup> In those few elk management units in Idaho in which populations are below management objectives (such as in the Lolo District of the Clearwater National Forest), these are areas where there have been declining elk populations since the 1990’s before wolves were ever reintroduced, due to poor habitat conditions and severe winters.
  - In Wyoming, a September 18, 2019 article in the Casper Star-Tribune cites to figures provided by the Wyoming Fish and Game Department, noting that the overall state elk population is 29 percent above objective, and that of 34 game units managed and counted by the state wildlife agency, 16 are at objective, 14 are above objectives, while only 4 are below objective.<sup>32</sup>
  - In Montana, an August 2019 press release from Montana Fish, Wildlife and Parks offered projections on the ungulate hunting season that year, finding that these are “good times for elk hunters in Montana” and that elk populations continue to be strong across most of the state. However, in many hunting districts access to private lands can be difficult. This

---

<sup>30</sup> Wildlife Program 2015-2017 Wild ungulate Assessment. Program Plan Initiative Charter 6. Compiled by Brock Hoenes – Statewide Elk Specialist; Sara Hansen – Statewide Deer Specialist; Richard Harris – Mountain Goat, Bighorn Sheep and Moose Section Manager; and Jerry Nelson – Deer and Elk Section Manager.

<sup>31</sup> Press Release, Idaho Dept. of Fish and Game, 2018 outlook: Hunters should have fair-to-excellent deer and elk hunting (Aug. 27, 2018) (available at: <https://idfg.idaho.gov/press/hunters-should-have-fair-excellent-deer-and-elk-hunting-2018>).

<sup>32</sup> Angus Thuermer, *Elk season ‘above objective’ as hunting season heats up*. Casper Star Tribune, Sept. 18, 2019. Available at: [https://trib.com/news/state-and-regional/elk-populations-above-objective-as-hunting-season-heats-up/article\\_87cdf59e-1a53-54e5-8988-f9bdec8f588d.html](https://trib.com/news/state-and-regional/elk-populations-above-objective-as-hunting-season-heats-up/article_87cdf59e-1a53-54e5-8988-f9bdec8f588d.html).

can reduce hunting success since many elk are staying on private lands.<sup>33</sup> Also noteworthy is research which was conducted regarding a decline in elk population in Montana's Bitterroot Valley, in which the decline was initially attributed to wolf predation. However, the study by the Montana Department of Fish, Wildlife and Parks discovered that the primary predator was mountain lion, not wolves.<sup>34</sup> The Department also found that another contributing factor was its too-generous issuance of hunting cow tags -- thus human hunting was also a major factor in the population decline.<sup>35</sup>

A report issued by the same agency in 2016 looked at the effects of hunting on elk near Yellowstone National Park. The report shows that the decline in bulls from hunting is likely having an effect on overall productivity of elk herds in general.<sup>36</sup> The park had over 19,000 elk prior to wolves being reintroduced and most observers think the number the park currently has is much more sustainable.<sup>37</sup> Decline in ungulate population can have beneficial impacts on vegetation, which in turn can have a cascade of further impacts on stream and river health as well as a cascade of other positive effects.<sup>38</sup>

All of the above information regarding ungulate populations, management unit objectives, and hunter harvest and hunter success rates in the adjacent northern Rockies states should be included in Washington's post-state-delisting Plan, perhaps briefly described in the body of the Plan and an accompanying appendix which provides the more detailed evidence from each state.

---

#### vi. Wolf Impacts on Disease

A paper published in 2011, the same year as the Wolf Plan's adoption, made a prescient call to action, urging that "[t]he role of predators should be considered in devising strategies for control of emerging or reemerging pathogens in natural populations" of other species.<sup>39</sup> The Department must update the science in the Plan to consider the potential impacts of wolves on curbing the spread of disease in Washington, including but not limited to Chronic Wasting Disease (CWD) and treponeme-associated hoof disease, commonly known as TAHD or hoof rot. CWD, which infects deer and elk, has not yet been detected in Washington but is spreading widely in wild ungulate populations in the Midwest and Western states. Hoof rot is an emerging disease already present in elk in parts of southeastern Washington. The call to consider the role of predators, such as wolves, in disease control thus could not be timelier for Washington.

---

<sup>33</sup> Press Release, Mont. Fish, Wildlife & Parks, 2019 big game hunting forecast (September 12, 2019) (available at: [http://fwp.mt.gov/news/newsReleases/hunting/nr\\_2923.html](http://fwp.mt.gov/news/newsReleases/hunting/nr_2923.html)).

<sup>34</sup> Perry Backus, Solving the Bitterroot Elk Mystery. How biologists and local volunteers finally figured out what was reducing the popular Ravalli County elk population. *Montana Outdoors*, Nov-Dec. 2014.

<sup>35</sup> Backus, 2014, *supra*.

<sup>36</sup> Montana Fish, Wildlife and Parks. 2016. Winter 2016 Hunting District 313 Elk Survey (Gardiner – 6-mile creek). Prepared by MFWP biologist Karen Loveless.

<sup>37</sup> Smith, Douglas et. al. 2003. Yellowstone After Wolves. *53 BioScience* 4.

<sup>38</sup> See e.g. Ordiz, 2013, *supra*.

<sup>39</sup> Wild, M.A., N.T. Hobbs, M.S. Graham, and M.W. Miller, 2011. The role of predation in disease control: A comparison of selective and non-selective removal of prion diseases in deer. *Journal of Wildlife Diseases* 47(1):78-93.

Additionally, the link between wolves and disease prevention or elimination is not restricted to CWD and hoof rot, nor is it limited to disease impacts on wildlife species but also has implications for protecting human health by preventing or reducing the potential for disease transmission from wildlife species to humans.

Several studies have shown a promising correlation between wolf presence and the reduction or elimination of the spread of CWD and possible prevention of its emergence in new areas.<sup>40</sup> *Wild et al. 2011* suggests that selective predation by predators is more effective than nonselective hunting by humans to reduce incidence of CWD in deer populations, and notes that the ability of wolves to detect subtle behavioral evidence of compromised individuals in a prey population and the coursing nature of wolves means wolves likely have even greater potential selective capability for diseased prey than ambush predators like mountain lions.<sup>41</sup> The authors propose that as elk populations and wolf range overlap in the future, wolf predation might work to suppress disease emergence or limit the prevalence of such diseases and that, in fact, had wolves been present to selectively predate when CWD first emerged, it is possible the disease might never have been gotten established or been detected.<sup>42</sup>

Another study suggests that predation by wolves could have potent effects on disease prevalence under certain conditions: “Although non-selective predation, as might occur with culling for example, may also be effective in eradicating the disease in a closed population, our results suggest that natural predation could substantially reduce the time required to eliminate the disease.”<sup>43</sup>

Additional studies have found wolf-related impacts on tuberculosis and Lyme disease, which are carried by species other than deer and elk and which are transmissible to humans. For instance, the extirpation of wolves across almost the entire contiguous United States is linked to the emergence of Lyme disease, which in the last few decades has been increasingly diagnosed in humans.<sup>44</sup> And a study of wolf predation on wild boars in Spain demonstrated a greatly reduced prevalence of tuberculosis in the boar population.<sup>45</sup>

---

<sup>40</sup> Wild et al., 2011, *supra*; Hobbs, A model analysis of effects of wolf predation on prevalence of chronic wasting disease in elk populations of Rocky Mountain National Park. April 12, 2006. Environmental Quality Council. May 7, 2010. Exhibit 25.

<sup>41</sup> Wild et al., 2011 at page 86.

<sup>42</sup> *Id.* at pp. 85, 87.

<sup>43</sup> Hobbs, 2006, *supra* at page 8.

<sup>44</sup> Levi, T., Kilpatrick, A.M., Mangel, M. and C.C. Wilmsers. Deer, predators and the emergence of Lyme disease. *Proceedings of the National Academy of Sciences* 109(27): 10942-7, June 2012. This study describes how in the absence of wolves following the species’ extirpation across most of the coterminous United States, coyotes have significantly expanded their territory across the country, leading to declines in red fox, a species which preys substantially on small mammals including several type of mice, voles and chipmunks. These small mammals have been found responsible for infecting 80-90% of the nymphal ticks which carry and spread Lyme disease, and this decreased predation on these small mammals due to the red fox population decline has contributed to a significant increase in prevalence of Lyme disease.

<sup>45</sup> Tanner, E., White, A., Acevedo, P., Balseiro, A., Marcos, J. and C. Gortazar, 2019. Wolves contribute to disease control in a multi-host system. *Scientific Reports*. <https://doi.org/10.1038/s41598-019-44148-9>

As can be seen from the cited studies, the role of wolves in the prevention of disease emergence or in reduction of existing disease cannot be understated and should be thoroughly addressed in a post-state-delisting wolf plan.

#### vii. Ecosystem Impacts

There is also new science available since adoption of the 2011 Plan on wolves' impacts on ecosystems, including vegetation, waterways, other large carnivores, mesocarnivores and other species.<sup>46</sup> It is well documented that wolves play a vital role in helping to restore and revitalize ecosystems. Wolves are known to improve the habitat where they exist and increase the population of countless species including birds, fish and plants.<sup>47</sup> Science shows that wolves play a vital role in maintaining and revitalizing their surrounding ecosystem.

Likely the most famous examples exist in Yellowstone National Park where reintroduction of wolves after their extirpation in 1926 caused a marked change to the surrounding landscape. Having wolves back in Yellowstone changed the behavior of elk within the park, pushing elk onto higher ground and away from riparian areas, which allowed those areas to recover and regrow vegetation. Vegetation recovery allowed beavers to flourish and create wetlands, which attracted frogs and swans. These once-eroded stream beds were no longer constantly barraged by hooves and wildflowers sprouted attracting insects and in turn songbirds. All of these components also allowed for the water to become shaded and create a more productive habitat for both water insects and fish. Wolves also helped to control the coyote population within the park which left smaller mammals more readily available for foxes, raptors and other carnivores. Wolves' return allowed for the predator prey cycle to become balanced, wolves leave the carcass of their prey, which allows for other predators such as eagles, bears and ravens to scavenge.<sup>48</sup>

Although Yellowstone is the most prevalent example of these effects, it should not be assumed it is an isolated incident or that trophic cascades can only occur in parks. Several studies of wolf impacts on vegetation in Wisconsin have shown positive vegetative response to the presence of

---

<sup>46</sup> Ripple, W.J., Beschta, R.L., Fortin, J.K., and C.T. Robbins, 2013. Trophic cascades from wolves to grizzly bears in Yellowstone. *Journal of Animal Ecology*. British Ecological Society. doi: 10.1111/1365-2656.12123. Pp. 1-17; Ripple, W.J., Estes, J.A., Beschta, R.L., Wilmers, C.C., Ritchie, E.G., Hebblewhite, M., Berger, J., Elmhagen, B., Letnic, M., Nelson, M.P., Schmitz, O.J., Smith, D.W., Wallach, A.D., and A.J. Wirsing, 2014. Status and Ecological Effects of the World's Largest Carnivores. *Science* 343, 1241484.

<sup>47</sup> Weiss, A.E., Kroeger, T., Haney, J.C. and N. Fascione, 2007. Social and Ecological Benefits of Restored Wolf Populations. *Transactions of the 72nd North American Wildlife and Natural resources Conference*. Pp. 297-319; Ripple et al., 2013, *supra*; Ripple et al. 2014, *supra*.

<sup>48</sup> Vucetich JA, Smith DW, Stahler DR., 2005. Influence of harvest, climate and wolf predation on Yellowstone elk, 1961–2004. *Oikos* 111: 259–270; Fortin D, Beyer HL, Boyce MS, Smith DW, Duchesne T, et al., 2005. Wolves influence elk movements: Behavior shapes a trophic cascade in Yellowstone National Park. *Ecology* 86: 1320–1330; Smith DW, Peterson RO, Houston DB., 2003. Yellowstone after wolves. *Bioscience* 53: 330–340; Ripple WJ, Beschta RL. 2007. Restoring Yellowstone's aspen with wolves. *Biol Conserv* 138: 514–519; Hollenbeck JP, Ripple WJ., 2008. Aspen snag dynamics, cavity-nesting birds, and trophic cascades in Yellowstone's northern range. *For Ecol Manage* 255: 1095–1103.

wolves.<sup>49</sup> For instance, one study tested the hypothesis that wolves were reducing local browse intensity by white-tailed deer thus indirectly mitigating the biotic impoverishment of understory plant communities in northern Wisconsin. Study results provided compelling correlative evidence of top-down trophic effects generated by the recovery of Wisconsin's wolf population: in areas of high wolf density, percentage cover of forbs and shrubs and percentage richness in species of forbs and shrubs was significantly higher than in areas of low wolf density.<sup>50</sup> While cautioning that research design is very important, these studies show that trophic cascade effects exist, are often times subtle, and likely require at least a decade to become apparent and might become more apparent over time.<sup>51</sup>

The vital role that wolves play in maintaining a healthy, functioning ecosystem cannot be discounted in the Plan and the science on trophic cascades needs to be updated to properly consider this important component.

### viii. Climate Change

Despite the availability of climate science at the time the 2011 Plan was written, the Plan fails to account for climate change, its effects on wolves, and how climate change could impact wolf effects on ecosystems. There is scientific agreement on the importance of top-level predators in their ability to help moderate effects of climate change.<sup>52</sup> The new Plan should be updated to consider this matter. A study that looked at 55 years of weather data in Yellowstone revealed that winters were getting shorter, as measured by the number of days with snow on the ground and temperatures above freezing. The study used available data to create a model that showed, in the absence of wolves, early snow melt led to a reduction in the presence of late-winter carrion and this causes a potential food bottleneck for scavengers.<sup>53</sup> However, wolves were found to largely mitigate this issue. Wolves were found to buffer the effects of climate change on carrion availability and thus allow scavengers to adapt to a changing climate over a longer time scale, which was more similar to natural processes.<sup>54</sup>

Another study suggests that the ability of animals to transmit social learning (*i.e.*, culture) horizontally (within generations) as opposed to vertically (between generations) may better enable them to adjust to climate change through behavioral adaptations to changed

---

<sup>49</sup> Callan, R., Nibbelink, N.P., Rooney, T.P., Wiedenhoft, J.E., and A.P. Wydeven, 2013. Recolonizing wolves trigger a trophic cascade in Wisconsin (USA). *Journal of Ecology*. British Ecological Society. doi: 10.1111/1365-2745.12095. Pp. 1-9; Bouchard, K., Wiedenhoft, J.E., Wydeven, A.P. and T.P. Rooney, 2013. Wolves facilitate the recovery of browse-sensitive understory herbs in Wisconsin forests. *Boreal Environment Research* 18 (suppl A): 43-49.

<sup>50</sup> Callan et al., 2013, *supra*.

<sup>51</sup> *Id.*

<sup>52</sup> Urban and Deegan, 2016. Opinion, Mark Urban and Linda Deegan, *T-Shirt Weather in the Arctic*. NY Times, Feb. 5, 2016. Available at: [http://mobile.nytimes.com/2016/02/06/opinion/t-shirt-weather-in-the-arctic.html?\\_r=0](http://mobile.nytimes.com/2016/02/06/opinion/t-shirt-weather-in-the-arctic.html?_r=0); Wilmers and Getz, 2005.

<sup>53</sup> Wilmers, C.C. and W.M. Getz, 2005. Gray Wolves as Climate Change Buffers in Yellowstone. *PLoS Biol* 3(4): e92.

<sup>54</sup> Wilmers and Getz, *supra*.

circumstances.<sup>55</sup> Given that wolves are enormously social animals which raise their young in family groups, and teach their young how to successfully hunt large wild ungulate prey and where to find them, and given that wolves routinely maintain territories and over generations may for decades use the same dens as birthing and pup-rearing sites, wolves are a species which transmits social learning – culture – and these findings are relevant to wolf management. Management which allows wolf families to remain intact, so they may transmit culture, may be essential in the species' adaption to a changing climate.

These studies show that wolves may have potential effects in a world dealing with climate change that are not currently considered in the Plan. Absent climate change considerations, state management policy formulation, decisions and actions have been undertaken without consideration of how these policies, decisions and actions may affect wolves' ability to navigate climate change and how they may affect the ability of wolves to help mitigate climate change impacts on other species. The Plan should be updated to include climate change science of relevance to wolves.

b. The Plan Should Address the Science Advocating Against Wolf Hunting

***Wolf populations are Self-Regulating and Should Not Be Hunted***

With extremely rare exceptions, wolf populations do not require human intervention and certainly not culling. Their populations are generally limited by prey availability, but when prey availability is unusually high wolf populations are limited by density- dependent factors, such as disease, and pack stability and territoriality.<sup>56</sup> Overexploitation and persecution of large carnivores resulting from conflict with humans comprise major causes of declines worldwide.<sup>57</sup> Although little is known about the interplay between these mortality types, hunting of predators remains a common management strategy aimed at reducing predator-human conflict. Emerging theory and data, however, caution that such policy can alter the age structure of populations, triggering increased conflict in which conflict-prone juveniles are involved.<sup>58</sup>

*Hunting of Wolves*

---

<sup>55</sup> Keith, S.A. and J.W. Bull, 2017. Animal culture impacts species' capacity to realize climate-driven range shifts. *Ecography* 40: 296-304.

<sup>56</sup> Cariappa, C. A., J. Oakleaf, W. Ballard, S. Breck, 2011. A Reappraisal of the Evidence for Regulation of Wolf Populations. *J. Wildlife Management* 75:3 (726-730).

<https://pubag.nal.usda.gov/pubag/downloadPDF.xhtml?id=49624&content=PDF>; Hatton, I. A., K. S. McCann, J. M. Fryxell, T. J. Davies, M. Smerlak, A. R. E. Sinclair, and M. Loreau, 2015. The Predator-Prey Power Law: Biomass Scaling across Terrestrial and Aquatic biomes. *Science* 349:doi:<http://0-dx.doi.org.libraries.colorado.edu/10.1126/science.aac6284>; Lake, B. C., J. R. Caikoski, and M. R. Bertram, 2015. Wolf (*Canis lupus*) Winter Density and Territory Size in a Low Biomass Moose (*Alces alces*) System. *Arctic* 68: 62-68.

<sup>57</sup> Teichman, Kristine J., Bogdan Cristescu, and Chris T. Darimont, 2016. Cougar-Human Conflict is Positively Related to Trophy Hunting. *BMC Ecology* 16:44. DOI 10.1186/s12898-016-0098-4. <https://bmcecol.biomedcentral.com/articles/10.1186/s12898-016-0098-4>.

<sup>58</sup> *Id.*



The growing awareness of animal cognition and emotion has enabled a significant shift in the active defense of arbitrary and often senseless violation of animal's lives and freedoms.<sup>59</sup> Acceptance of the intrinsic value of wild animals in nature and an associated motivation to prevent harm to those animals, is often reported as an almost universal ethic among a wide variety of stakeholders.<sup>60</sup>

A study of wolves who have been heavily hunted also has shown that the individual animals experience physiological and psychological stress that effect of this stress extend well beyond the moments of terror during which the hunt takes place.<sup>61</sup> Wolves are hunted, not for sustenance, but for trophy benefits, that is for amusement, pleasure, and excitement of recreational hunter.<sup>62</sup> Public approval of trophy hunting is particularly low,<sup>63</sup> and many people do not believe trophy acquisition is an appropriate motivation to kill sentient creatures.<sup>64</sup> Even in Alaska where one study in Alaska found that the majority (87 percent) of Alaskans support hunting for meat, the same study found that 46 percent of Alaskan hunters were opposed to trophy hunting.<sup>65</sup>

A significant number of people care about, not only wildlife populations, but individual wildlife welfare.<sup>66</sup> In any event, so-called sport hunting of wolves does not comprise any credible wolf management strategy and should not be included in any range of management options in any subsequent Washington wolf management plan.

#### c. Other Necessary Updates to the 2011 Plan

Updating to the Plan to include best available science is a priority. Yet other types of updates are also essential.

---

<sup>59</sup> Bekoff, Marc, and Jessica Pierce, 2017. *The Animals' Agenda: Freedom, Compassion, and Coexistence in the Human Age*. Boston: Beacon Press. 225 pages.

<sup>60</sup> Butler W.F., Acott T.G., 2007. An Inquiry Concerning the Acceptance of Intrinsic Value Theories of Nature. *Environmental Values* 16:2, pp.149-168; Danielle Ramp and Marc Beckoff, Compassion as Practical Evolved Ethic for Conservation. *Bioscience* 65:3, pp. 323-327.

<sup>61</sup> Bekoff and Pierce, *supra*. Bryan et al, 2017.

<sup>62</sup> Chris Genovali and Paul Paquet, Cecil the Lion and Compassionate Conservation. *Vancouver Sun*, August 10, 2015. Available at: <http://www.vancouver.sun.com/opinion/oped/Opinion+Cecil+lion+compassionate+conservation/11279680/story.html>

<sup>63</sup> Nelson, Michael Paul, Jeremy T. Bruskotter, John A. Vucetich, & Guillaume Chapron, 2016. Emotions and the Ethics of Consequence in Conservation Decisions. *Conservation Letters*. Pages 9(4), 302–306. doi: 10.1111/conl.12232.

<sup>64</sup> Decker, D.J., Stedman, R.C, Larson, L.R. & Siemer, W.F., 2015. Hunting for Wildlife Management in America. *The Wildlife Professional*, Spring, 26-29.

<sup>65</sup> Suzanne Miller, Sterling Miller and Daniel McCollum, Attitudes Towards and Relative Value of Alaskan Brown and Black Bears to Resident Voters, Resident Hunters and Nonresident Hunters. *Ursus*, Vol 10, 1998.

<sup>66</sup> Bekoff and Pierce, 2017 *supra*.

First, it is necessary to eliminate statements within the 2011 Plan that science has debunked. One example is any outright statement or implication that wolves must be killed to maintain social tolerance. Another example is any outright statement or implication that killing wolves is an effective way to resolve livestock conflicts.

It also is imperative that language in the Plan be changed to reflect an emphasis on controlling and changing human and livestock behavior, rather than changing and controlling wolf behavior. The Plan as currently written emphasizes just the opposite. If the results weren't so tragic for wolves, as has been seen in the past 11 years since wolves have returned to the state, it would be comical to think a conservation and management plan for a population of wild animals would focus on controlling the wild animals rather than identifying ways to change the behavior of humans and domesticated livestock. Of these three factors, it is the behavior of humans and livestock over which the Department can exercise control. Millions of years of evolutionary process argue against continued irrational attempts to control wolves.

d. Other Comments

**We caution the Department against using other states' recovery plans to inform Washington's post-delisting plan.**

In Oregon the state wolf population is not biologically recovered yet the Oregon Fish and Wildlife Commission removed wolves from the state endangered species list in 2015.<sup>67</sup> While the public process was underway to determine whether wolves should be state-delisted, two dozen scientists, in multiple comment letters submitted to the state, contested the recommendation of the state wildlife agency that wolves should be delisted.<sup>68</sup> Two of the scientists are experts in population viability analysis ("PVA") and both concluded the PVA prepared by the Oregon Department of Fish and Wildlife was fundamentally flawed. The state's decision to prematurely delist has been legally challenged and that lawsuit is still pending.<sup>69</sup> Wolves in Oregon also have not recovered to functionally effective levels. There are currently fewer than 140 confirmed wolves in the state yet habitat modeling studies show Oregon could support up to 1450 wolves.<sup>70</sup> As of 2015, according to habitat modeling conducted by the Oregon Department of Fish and Wildlife, wolves occupied only 13,222 km<sup>2</sup> of the identified 106,853 km<sup>2</sup> of suitable wolf habitat in the state, or 12.37 percent..<sup>71</sup> In the intervening years, only two additional packs have established territories beyond the then-occupied habitat.

---

<sup>67</sup> Oregon Gray Wolf Delisting Rule, November 9, 2015 amendment to OAR 635-100-0125

<sup>68</sup> Scientist' Comments Letters on Proposed Oregon State-Delisting, 2015. 8 letters.

<sup>69</sup> *Cascadia Wildlands et al. v Oregon Department of Fish and Wildlife et al.* (No. A161077), a case challenging the Commission's decision to remove wolves from the list of state endangered species.

<sup>70</sup> Larsen, T. and W.J. Ripple, 2006. Modeling gray wolf (*Canis lupus*) habitat in the Pacific Northwest, U.S.A. *Journal of Conservation Planning* Vol 2: 17-33.

<sup>71</sup> Oregon Gray Wolf Biological Status Review. 2015. Oregon Department of Fish and Wildlife. Attachment 3, Appendix A. Mapping Potential Gray Wolf Range in Oregon, at p. 9.

[https://www.dfw.state.or.us/agency/commission/minutes/15/11\\_november/Exhibit%20B\\_Attachment%203\\_Appx%20A.pdf](https://www.dfw.state.or.us/agency/commission/minutes/15/11_november/Exhibit%20B_Attachment%203_Appx%20A.pdf)

State wolf plans in the northern Rocky Mountains and how wolves are managed under those plans are not anything we would want to see emulated in Washington. In combination, the three states have around a total of 1500 wolves. For population viability, it is recommended to have around 3,000-5,000 animals in order to achieve an effective population of around 500 breeders.<sup>72</sup> Yet, the states of Montana, Idaho and Wyoming are determined to prevent that from happening and each state has expressed a desire to greatly reduce its respective wolf population. As a result, all three states have instituted extremely aggressive state-sanctioned wolf hunting and trapping seasons. Since wolves were federally delisted there, more than 3,900 wolves have been killed by hunting and trapping in the three states combined.<sup>73</sup> Additional wolves are killed for livestock conflicts by agency staff and by livestock owners, as none of the states require any use of nonlethal measures to prevent conflicts.

In addition to Washington, Oregon and the northern Rocky Mountains states, four additional states have their own wolf plans. This includes the western Great Lakes states of Minnesota, Michigan and Wisconsin, as well as California.

State wolf management plans for Idaho, Montana, Wyoming, Minnesota, Michigan and Wisconsin all allow hunting and/or trapping seasons on wolves. In Idaho there is always some hunting or trapping going on in the state somewhere; as a result, there is never any time of the year where wolves are completely safe and Idaho's wolf plan provides no respite. Wyoming law allows people to use snowmobiles to chase wolves and other predatory animals such as coyotes to exhaustion and then run them over; the state wolf plan provides no protection from this barbaric practice.<sup>74</sup> In Montana, the state wolf plan offers no protections to wolves crossing from Yellowstone National Park into the state. The Montana state commission and legislature refuse to enact buffer zones in the areas immediately adjacent to Yellowstone National Park to prevent the killing of park wolves who wander outside its protective boundaries, even though the park wolves have been the subject of ongoing, decades-long research projects, are revered by people worldwide and even though their presence is what generates visitor attendance culminating in around \$33 million economic input annually to the three-state Greater Yellowstone Ecosystem area. Under Wisconsin's state plan and laws, houndsmen are allowed to run their dogs in wolf territory to hunt bears and can train their dogs in wolf territory prior to the start of bear season. Wisconsin's bear-baiting season is nearly five times as long as allowed in any other state, so hounds are in wolf territory even during pup rearing season, resulting in hundreds of hunting dogs being killed by wolves yet the state pays \$2500 compensation for each hound killed -- so far running up a tab of more than \$850,000 and even paying out compensation for hounds killed in zones the state has designated as caution areas or even when the houndsman has violated game

---

<sup>72</sup> Shaffer, M.L., 1981. Minimum population sizes for species conservation. *BioScience*. Vol 31(2): 131-134.

<sup>73</sup> Figures tallied yearly from websites for the respective state fish and wildlife agency, though some have stopped reporting wolf harvest data.

<sup>74</sup> Mike Koshmiri, *Lawmakers won't touch 'yote whacking' with snowmobiles*. Jackson Hole Daily, Aug. 1, 2019. Available at: [https://www.jhnewsandguide.com/jackson\\_hole\\_daily/local/wyoming-lawmakers-won-t-touch-yote-whacking-with-snowmobiles/article\\_b56c3bfc-4369-5217-bff4-877b169a9236.html](https://www.jhnewsandguide.com/jackson_hole_daily/local/wyoming-lawmakers-won-t-touch-yote-whacking-with-snowmobiles/article_b56c3bfc-4369-5217-bff4-877b169a9236.html).

laws.<sup>75</sup> In Michigan, the state legislature has several times overridden citizen initiatives to prohibit wolf hunting<sup>76</sup>. And in Minnesota, during a period of time when wolves were temporarily federally delisted and a state-sanctioned hunting season was approved in 2012, the Ojibwe Tribe, which considers wolves to be sacred and like family members, banned wolf-hunting on its reservation. When the tribe asked the state to ban wolf-hunting on portions of reservation land owned by the state, the state denied the request.<sup>77</sup> Although, the passage of time has resulted in some changes in attitudes by elected officials in Minnesota regarding wolf hunting -- an April 2019 vote in the state house of representatives banned wolf hunts -- a vote that also was supported afterwards by Minnesota's Governor and Lieutenant Governor -- but the bill failed to make it to the governor's desk.<sup>78</sup>

In California, the state endangered species act protections granted to wolves prevents the killing of wolves for livestock conflicts or in hunting or trapping seasons. (The gray wolf also is currently fully protected under the federal Endangered Species Act throughout the state.) State law allows for the killing of endangered species only under very restricted circumstances and any take of the species must be fully mitigated.<sup>79</sup> The state wolf Plan follows the law, and focuses entirely on the use of nonlethal conflict deterrents.

If the Department were to take a page from any of the other state wolf plans, it should be the state plan for California; any of the others manage wolves according to outdated worldviews, using the flawed North American Model of Wildlife Management as policy guidance.<sup>80</sup>

Lastly, we request that any post-delisting recovery plan be reviewed by an outside panel of peer reviewers with specific expertise in wolf biology, behavior, ecology, genetics, population

---

<sup>75</sup> Dennis Anderson, *Some Wisconsin bear hunters are seeing brazen attacks on dogs*. Star Tribune, Oct. 3, 2019. Available at: <http://www.startribune.com/anderson-some-wisconsin-bear-hunters-are-seeing-brazen-attacks-on-dogs/562085952/>.

<sup>76</sup> Garrett Ellison, *With a round of howls, Michigan Legislature sends wolf hunting bill to governor*. Michigan Live, Apr. 2, 2019. Available at: [https://www.mlive.com/news/2016/12/wolf\\_hunt\\_michigan\\_sb\\_1187.html](https://www.mlive.com/news/2016/12/wolf_hunt_michigan_sb_1187.html).

<sup>77</sup> Dan Kraker, *Ojibwe bands ban wolf hunting - but only on Indian-controlled land*. MPR News, Oct. 31, 2012. Available at: <https://www.mprnews.org/story/2012/10/31/ojibwe-bands-ban-wolf-hunting-but-only-on-indian-controlled-lands>.

<sup>78</sup> Walker Orenstein, *Fight over wolf hunting in Minnesota is heating up again*. Minn Post, May 25, 2019. Available at: <https://www.mprnews.org/story/2019/05/25/fight-over-wolf-hunting-in-minnesota-is-heating-up-again>; Dave Orrick, *Minnesota wolf hunting ban fails to reach governor's desk. Walz had indicated he would have signed it*. Pioneer Press, May 23, 2019. Available at: <https://www.twincities.com/2019/05/23/minnesota-wolf-hunting-ban-fails-to-reach-governors-desk-walz-had-indicated-he-would-have-signed-it/>.

<sup>79</sup> California Fish and Game Code §§ 2080 and 2081(a)-(c).

<sup>80</sup> Artelle, K.A., Reynolds, J.D., Treves, A., Walsh, J.C., Paquet, P.C. and C.T. Darimont, 2018. Hallmarks of science missing from North American wildlife management. *Sci. Adv.* 4 (3), eaao0167. DOI: 10.1126/sciadv.aao0167; Nelson, M.P., Vucetich, J.A., Paquet, P.C., and J.K. Bump, 2011. An Inadequate Construct? North American Model: What's Falwed, What's Missing, What's Needed. *The Wildlife Professional*. Summer 2011 pp. 58-60; Vucetich, J.A., Bruskotter, J.T., Nelson, M.P, Peterson, R.O. and J.K. Bump, 2017. Evaluating the principles of wildlife conservation: a case study of wolf (*Canis lupus*) hunting in Michigan, United States. *Journal of Mammalogy* 98(1): 53-64.

viability, policy impacts on wolf conservation, livestock-wolf conflicts, wild ungulates, and social and ethical implications of large carnivore management. This is the only way to ensure the new plan is scientifically defensible and is the best possible plan to promote recovery and conservation of the wolf population in Washington.

### **III. Post-Recovery Plan Suggestions**

Should the Department decide to write an entirely new plan rather than updating the current one, we suggest the following be incorporated into the Department's post-state-delisting management plan as tenets of successful management of wolves after the population truly reaches recovery in Washington.

- The Department should not allow public hunting or trapping of wolves in the state.<sup>81</sup>
- The Department should not permit the gray wolf to be designated as a game mammal under state law. Instead, the Department should create an alternate designation for wolves that still provides them some kind of protected status against any recreational hunting or trapping.
- The Department should manage the gray wolf, as well as other carnivores, as a priority on our public lands. Particularly, the Department should advocate for restoration of native ecosystems at both the federal and state level.
- The Department should work to coordinate interagency cooperation at both the state and federal level into the post-state-delisting gray wolf management plan. For example, the Department should work to collaborate with the US Forest Service on grazing allotment management to ensure that wildlife welfare is not negatively impacted by another government agency's policy.
- The Department should work to reform policy to prioritize management of the gray wolf, and other carnivores, over private interests on state and federal public lands. For example, when there is a conflict between wolves and livestock, the Department should make the decision to require the producer to move the livestock instead of killing wolves. Wolves and other wildlife should be allowed to thrive on open public lands.
- The Department should work to fulfill its paramount responsibility, which is to preserve, protect and perpetuate the state's fish, wildlife and ecosystems for future generations, while providing sustainable fish and wildlife recreational and commercial opportunities.

---

<sup>81</sup> Vucetich and Nelson, 2014. Wolf hunting and the ethics of predator control. Oxford Handbooks online. Subject: Political Science, Comparative Politics, Political Theory. Online Publication Date: Jul 2014 DOI: 10.1093/oxfordhb/9780199927142.013.007.

- There should not be killing of wolves or other wildlife on state and federal public lands for private interests.
- There should not be killing of wolves or other wildlife for conflicts with livestock which occur on public lands.
- The Department should manage native carnivores in the state of Washington using the best available science.
- The Department should promote recovery of resilient, sustainable carnivore populations and healthy ecosystems, healthy watersheds and healthy populations of native prey such as elk, deer and moose.
- There should be no use of taxpayer funds to lethally manage wildlife.

#### IV. Conclusion

WSCA appreciates the opportunity to provide comments to the Department as part of the Department's public scoping for a post-state-delisting wolf plan. We urge you to take these into serious consideration in determining next steps for this process. We cannot emphasize enough the need for the Department to adhere to best available science in determining future management of wolves in Washington.

Sincerely,



Chris Bachman  
Wildlife Director  
The Lands Council



Nick Cady  
Legal Director  
Cascadia Wildlands

s/ Samantha Bruegger

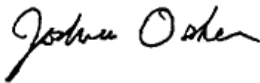
Samantha Bruegger  
Wildlife Coexistence Campaigner  
WildEarth Guardians



John Mellgren  
Attorney, Wildlife Director  
Western Environmental Law Center



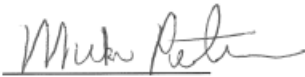
Sophia Ressler  
Washington Wildlife Advocate/Staff  
Attorney  
The Center for Biological Diversity



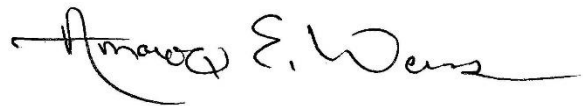
Josh Osher  
Public Policy Director  
Western Watersheds Project

s/ Jessica Walz Schafer

Jessica Walz Schafer  
Pacific Wildway Director  
WildlandsNetwork



Mike Petersen  
Executive Director  
The Lands Council



Amaroq Weiss  
Senior West Coast Wolf Advocate  
The Center for Biological Diversity