



# ANIMAL WELFARE INSTITUTE

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July 5, 2006

BY E-MAIL AND REGULAR MAIL

Mr. Vaughn L. Baker, Superintendent  
Rocky Mountain National Park  
Estes Park, CO 80517

Superintendent:

On behalf of the over 25,000 members of the Animal Welfare Institute (AWI), I submit the following comments on the Draft Environmental Impact Statement on the Elk and Vegetation Management Plan for Rocky Mountain National Park (hereafter Draft EIS).<sup>1</sup>

The proposal to engage in a long-term strategy to reduce the elk population in Rocky Mountain National Park (RMNP) using lethal control techniques represents a step back in time for the National Park Service (NPS). The slaughter of wildlife residing in national parks was practiced in the past when the NPS blatantly ignored its own legal mandates preferring to intensively manage and manipulate park wildlife based on inadequate science. Remarkably, though the Leopold Report from the late 1960s compelled the NPS to rediscover its natural regulation mandate, the elk slaughter plan under consideration by the RMNP is entirely antithetical to this mandate.

The Draft EIS attempts to justify the proposed 20-year lethal elk control program by claiming that it is consistent with the NPS natural regulation mandate and that elk reduction is needed to restore the park to a more natural condition and to aid in the recovery of particular species that have allegedly been harmed by excessive elk herbivory primarily on the core elk winter range within RMNP. The NPS claim that its natural regulation mandate justifies the intentional manipulation of park wildlife and the park ecosystem to achieve a desired condition for the park is entirely inconsistent with the proper interpretation of the natural regulation mandate. It also sets an enormously dangerous precedent for the future management of all national parks.

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<sup>1</sup> Since the deadline for public comments on the Draft EIS fell on a federal holiday, we ask that the National Park Service, as is a common practice within all federal agencies, accept these comments on July 5, 2006. Also, in the event that the National Park Service elects to reopen the comment period to receive additional input on the Draft EIS, AWI reserves the right to submit supplementary comments.

The natural regulation mandate is the principal standard that separates the NPS from other federal land management agencies. The management of national parks must allow nature to dictate ecological conditions. Wildlife population dynamics, movements, distribution and habitat use patterns must be dictated by natural conditions. While wolves and grizzly bears may have once been part of the ecology of RMNP and may have aided in suppressing elk population growth, they were not present when RMNP was established. Indeed, other than Yellowstone and parks in Alaska, there are few national parks that have a full assemblage of native vertebrates. As a consequence, the proposal put forth by the RMNP, if approved, would set a precedent that would allow any national park to engage in the slaughter of park wildlife claiming that its actions are essential to replace the depredation and other impacts of predators who no longer exist and whose restoration may be biologically, ecologically, or socially unacceptable.

Had the natural regulation mandate been intended to be interpreted as it is by the RMNP, surely other national parks would have already attempted to propose lethal control in place of depredation to restore “natural” conditions. If this were the case, there would be no need for the Organic Act to explicitly allow for the “destruction of such animals and of such plant life as may be detrimental to the use of any . . . parks . . .” 16 U.S.C. 3. This statute exists because it was the intent of Congress in promulgating the Organic Act to ensure that the destruction of wildlife within national parks, unless explicitly allowed for in a park’s enabling legislation, would only occur when the animal or animals were demonstrated to be detrimental to the use of any park. Such a determination requires absolute and irrefutable proof of a significant adverse impact to the park, park wildlife, or other park resources that is detrimental to the park’s use. The RMNP is not attempting to justify its elk slaughter program under this statute and, in fact, considering its lack of conclusive evidence of long-term and permanent elk herbivory impacts on vegetation in throughout the park, it could not meet the standard required to justify the proposed slaughter. Instead, the RMNP is relying on a “lethal control = predation = restoration of particular species” argument that, when subject to even minimal scrutiny, can be easily rejected. Even if such a slaughter could be justified, it must be considered an option of last resort. In this case, not only does RMNP’s own data justify the termination or rejection of this proposal but it is clear that there are a variety of other non-lethal management options that RMNP should attempt first before even considering lethal control.

The RMNP’s strict interpretation of its natural regulation mandate is perplexing considering that few, if any, national parks actually adhere to this legal mandate. In Yellowstone, for example, while there may be debate over the impact of snow-packed roads on bison ecology, there is no question that bison (and other wildlife) use the roads as energy efficient travel corridors, that bison movement and distribution patterns have changed as a result of the roads, and that the roads introduce a level of artificiality into the Yellowstone ecosystem. Yet the NPS has been consistently opposed to terminating oversnow winter use activities and its road packing program to restore more natural conditions and processes to Yellowstone’s winter ecology. Similarly, though RMNP clearly desires to restore “naturalness” to the park, it is not proposing to remove roads, buildings, or other infrastructure to achieve this objective. While admittedly, the NPS

has a secondary mandate to allow public use of the parks, there is no law requiring the NPS to construct roads, restaurants, hotels, or other infrastructure to facilitate such use.

Ultimately, the restoration of natural conditions should be the goal of all national parks. Achieving this goal, however, must be done in an ecologically holistic manner that does not rely on lethal control of existing native wildlife or intensive management of token predators to obtain, temporarily or permanently, some perceived notion of what was or is “natural.” Admittedly, the reintroduction of wolves – and grizzly bears -- to RMNP is a proposal worth significant study, but it is not appropriate or biologically advisable to limit such an effort to a single national park that is not large enough to sustain a viable population of either species. In this case, the RMNP is only proposing to introduce gray wolves (see Alternative 5) not for the purpose of reestablishing gray wolves, a federally protected species, as a viable population and critical component of the ecosystem but rather as a tool, subject to intensive management, to predate upon and disburse elk who have become sedentary and/or are found in high concentrations on winter range. Such a project, considering the proposed intensive management strategies – including sterilization of males wolves, intensive manipulation of wolves to maintain them within the park’s boundary, immediate removal of any wolf killing livestock, removal of wolves who do not hunt or harass elk, euthanasia of removed wolves if sanctuary space is unavailable, and lethal control of adults wolves and wolf pups -- would blatantly violate both the Endangered Species Act and the NPS Organic Act and implementing regulations that provide the basis for the NPS natural regulation mandate.

AWI opposes the reintroduction of gray wolves as proposed in Alternative 5, the environmentally preferred alternative, because of the anticipated intensive management requirements, because RMNP is not large enough to sustain a viable wolf population, and due to concerns over the acceptance of wolves by local residents and communities. AWI would only support wolf restoration if: 1) restored wolves were provided complete protection (not designated as a non-essential, experimental population) under the Endangered Species Act as a species or as a Distinct Population Segment should wolves in Montana, Idaho, and Wyoming be delisted; 2) the recreational hunting of wolves is not allowed; 3) restoration efforts are ecosystem wide and not limited to only RMNP; 4) restoration efforts are endorsed by all relevant state and federal agencies; and 5) restoration efforts are endorsed by an overwhelming majority of the public. In time, if socially acceptable, grizzly reintroduction should also be considered but only if subject to the same criteria as indicated above.

Beyond the issues associated with the NPS interpretation of its natural regulation mandate and the feasibility or advisability of predator reintroduction in RMNP, the Draft EIS provides ample evidence demonstrating that the proposed slaughter of elk is not necessary or consistent with NPS statutory and regulatory mandates. This evidence demonstrates that the elk population has declined since 2002, that aspen may not be a natural component of RMNP, that RMNP does not have adequate baseline vegetation monitoring data, and that there are an abundance of non-lethal strategies that RMNP should attempt to address alleged elk herbivory impacts on particular species before it embarks on its proposed elk slaughter. In addition, the Draft EIS fails to disclose critical

information relevant to the issues and impacts under review. For example, the Draft EIS contains no information on long-term precipitation patterns or anthropogenic impacts to surface waters, groundwater tables, or underground aquifers despite its focus on restoring beavers to improve hydrological conditions in the park. In addition, despite the precedent setting impact of the underlying argument being used by RMNP to justify its proposed elk slaughter, the Draft EIS provides no analysis of how this effort, if successful, will affect wildlife management throughout the national park system.

Because of the lack of evidence to justify the lethal control of elk in RMNP and given the serious problems associated with wolf reintroduction to the park, AWI supports Alternative 1 – the no action alternative. In the event that the NPS believes that it must provide some protection for willow or other vegetative communities allegedly adversely impacted by the elk, it should consider employing fences – as proposed Alternatives 2, 3, 4, and 5 – to eliminate large ungulate impacts to particular species. As the NPS understands, it is not obligated to pick any one of the five alternatives subject to review in the Draft EIS, rather it can create new alternatives based on strategies subject to analysis. In this case, AWI suggests that the NPS select Alternative 1 as modified to allow for the use of fencing to provide protection, as necessary, to vegetative communities subject to browsing by elk.

The remainder of this comment letter will further elaborate on many of the concerns associated with the proposed elk slaughter and other actions contemplated in the Draft EIS while also identifying deficiencies in the analysis.

The purpose and need for the proposed action cannot be justified based on the existing evidence. In this case, since RMNP only identified Alternative 5 as the environmentally preferred alternatives, it is not clear if Alternative 5 is the preferred alternative or if RMNP and the NPS may select another alternative as its preferred alternative or proposed action as the National Environmental Policy Act process is completed. For this reason, reference to a proposed action in the context of these comments includes all of the components of Alternative 5 – elk slaughter, fencing, elk redistribution, and wolf reintroduction. Elk slaughter, fencing, and elk redistribution are also included in Alternatives 2 (maximum lethal control), 3 (less intense but longer term lethal control), and 4 (less intense lethal control). Alternative 4 also provides for fertility control of the elk population. Alternative 1 is the no-action or status quo alternative.

The actions of primary concern are lethal elk control and wolf reintroduction as both are highly controversial and, as proposed, illegal. The use of fencing to protect vegetative communities, while not natural and though potentially disruptive of the visitor experience, is acceptable as a means of providing short term or long-term protection to species subject to intensive elk or other ungulate herbivory. Similarly, the use of personnel on foot or horseback, noise makers, rubber bullets or similar devices, and trained dogs to harass and disburse sedentary elk or elk found in unnatural concentrations on their winter feeding areas, while not an ideal management strategy for use in a national park, is far preferable to lethal elk control.

The NPS attempts to justify its proposed actions using a variety of arguments. Many of those arguments are identified below along with a discussion of the deficiencies associated with each argument.

- A. RMNP argument: NPS management policies direct managers to strive to maintain the components and processes of naturally evolving park ecosystems. If biological or physical processes were altered in the past by human activities, they may need to be actively managed to restore them to a natural condition or to maintain the closest possible approximation of the natural condition. Natural conditions reflect the condition of resources that would occur in the absence of human dominance over the landscape and occur when components and processes of the natural systems are intact. Change in natural conditions, however, are expected and recognized as an integral part of the functioning of natural systems. Draft EIS at iii.

RMNP relies primarily on these policies and other similar standards imposed by the Organic Act to claim that its proposed slaughter of zero to 5,200 elk (depending upon the alternative selected) inside of the park over 20 years is consistent with NPS policies intended to restore natural conditions or processes. While RMNP should be commended for its desire to restore natural conditions to the park, its proposed strategies to achieve this objective are not consistent with NPS laws or policies.

First, RMNP is not an intact natural system not just because it does not comprise a complete ecosystem but also because of a variety of anthropogenic impacts that affect the park each day. Whether it is the diversion of water for local cities or agriculture, pollution impacts from external sources, the lack of a complete assemblage of native ungulates (e.g. bison), anthropogenic barriers to natural elk immigration and emigration, and the very existence of roads, building, and other infrastructure within the park, the true restoration of natural processes and conditions would require far more than killing elk or reintroducing a token and intensively managed wolf population.

Second, wolves and grizzly bears were extirpated from RMNP long before it was established in 1915. While humans were responsible for the extirpation of these predators, the NPS is proposing to kill elk to ostensibly repair the damage done by past human actions despite the fact that the current elk population is within the range of natural variation as determined by modeling efforts and despite the fact that non-lethal strategies are available to harass elk and redistribute elk across the landscape.

Third, since NPS policies provide discretion as to when or how the NPS should engage in restoration efforts (e.g., direct managers to “strive” to maintain the components and processes of naturally evolving park ecosystems; if biological or physical processes were altered by human activities they “may” need to be actively managed), RMNP has the discretion

and, indeed, the obligation to choose a more humane and non-lethal approach. In this case, choosing the lethal approach, particularly given the lack of evidence to justify such a slaughter and the existence of a number of alternative strategies to address NPS concerns without resorting to lethal control, is entirely inconsistent with NPS statutes, regulations, and policies. Even if the NPS did nothing, the Draft EIS contains no evidence that such a scenario would lead to permanent and long-term damage to the elk, other wildlife, or the majority of the vegetative communities in the park. Indeed, the only impact of such a scenario would be localized effects on specific vegetative species on core elk winter range within the park. Not only is such an impact entirely natural but it could ultimately aid RMNP by causing the continued decline in the elk population due to density dependent food limitations.

Fourth, RMNP claims that natural regulation of the elk population in the park has always relied on some of the park elk being killed by hunters using lands adjacent to the park. Draft EIS at 16. RMNP then claims that its elk have never been greatly influenced by the public hunt as its population growth rates have been primarily limited by the lack of food, yet hunter-killed elk numbers for lands outside of the park are at their highest historic levels. *Id.* While it is unclear what impact public hunting has on park elk and though AWI takes no position on the hunt itself, the NPS should engage in negotiations with the Colorado Division of Wildlife to allow only elk cows to be killed in area open to hunting on lands adjacent to the park. The Draft EIS suggests that the bulk of the elk hunted at present are males, Draft EIS at 19, yet, as the NPS concedes in its own analysis of its proposed lethal control plan, if elk are to be hunted, removing female elk of reproductive age is the most effective means of generating a population level effect.

- B. RMNP argument: The RMNP elk population is in excess of what would exist under more natural conditions. Such conditions include predation by grizzly bears and wolves and competition with bison.

Though RMNP concedes that modeling efforts are not always accurate predictors of real life conditions, Draft EIS at 42, it claims that under more natural conditions its elk population would fluctuate between 1,200 and 2,100 elk and that elk would be less sedentary, more wary, and less likely to concentrate on winter range. Draft EIS at iv. Though the RMNP elk population allegedly reached its peak between 1997 and 2001 when the population ranged from 2,800 to 3,500 animals, since 2002, the elk population (both park and town subpopulation combined) has declined to 1,700 to 2,200 animals. Draft EIS at v. The present population size, therefore, is within the estimated natural range of fluctuation as predicted by modeling efforts. While modeling exercises suggest that the elk population, with no management, would fluctuate between 2,200 and 3,100 animals, Draft EIS at xi, the Draft EIS also claims that the park subpopulation is estimated to be at its food-

limited carrying capacity and that the town subpopulation may be at or below carrying capacity. Id. Thus, while population numbers may increase they may also decrease depending on primary production, amounts and timing of precipitation, habitat destruction or fragmentation outside of the park, and other anthropogenic factors.

While these facts may or may not be consistent with what would be found if RMNP was fully intact, the NPS cannot engage in a massive elk slaughter operation – primarily to be conducted under the cover of darkness, using both standard firearms and firearms equipped with silencers, mainly in the fall but potentially year round -- when there is absolutely no evidence to suggest that the current elk population is at an excessively high number or causing long-term and permanent damage to park ecology without violating the NPS Organic Act, its implementing regulations, and NPS policies. Indeed, considering that the existing population is within natural variability (as determined through a modeling exercise) and that both subpopulations are at or below carrying capacity due to food limitations or other reasons, there is simply no factual basis for any further evaluation of the proposed elk slaughter plan.

Perhaps more important than overall elk numbers in RMNP, is elk density or concentration in its core winter range within RMNP and the sedentary behavior demonstrated by 25 percent or less of the total elk population. Lethal control, however, is not necessary to disperse elk and, in fact, may not be particularly efficacious since a dead elk is unable to teach other elk to be fearful or wary of humans. Non-lethal strategies, such as fencing to keep elk out of areas requiring protection, or harassment strategies (on horseback, using cracker shells or rubber bullets, or with trained dogs) is likely to be more effective since these activities can be continued without interruption (versus lethal control which would require disease sampling of the body, removal or other disposition of the carcass) and because they are based on the use of aversive stimuli which, in time, the elk will learn to fear. At a minimum, the NPS should attempt the use of these non-lethal strategies before embarking on its proposed slaughter.

- C. RMNP argument: High concentrations of elk and excessive levels of elk herbivory have degraded the vegetative communities that support large numbers of bird, butterfly, and plant species.

The impact of elk on plant species will be dealt with below though it is important to note that the Draft EIS is focused only on certain vegetation types located primarily within the elk's core winter range inside of the park and that, except for the alleged impacts in this localized area where wintering elk tend to concentrate, there is no evidence that RMNP elk are negatively affecting native biodiversity on a landscape scale. Draft EIS at 21.

In regard to elk impacts to bird and butterfly species, it is one thing to theorize about such impacts based on the assumption that elk herbivory destroys bird and butterfly habitat and that, therefore, bird and butterfly populations must be in decline, versus proving that such impacts are real. As revealed in the Draft EIS, there is no evidence that bird and butterfly population have been adversely impacted by elk herbivory or elk concentrations in the park. For example, the alleged decline in the ptarmigan on RMNP was determined to be more strongly influenced by local weather than the size of the elk population. Draft EIS at 155 citing Wang et al. 2002a and 2002b. For songbirds, though the Draft EIS contains information about species richness in different habitat types, there was not a shred of evidence to demonstrate that songbird populations have declined or otherwise have been affected by the elk. Draft EIS at 156. Similarly, for butterflies, while evidence may exist suggesting that they prefer certain habitats, no evidence was offered, beyond pure speculation, that RMNP elk were adversely impacting butterflies. Until such direct evidence is available, the NPS should not rely on simple assumptions to justify its proposed elk slaughter.

- D. RMNP argument: An increase in elk calving near areas where the public recreates in the Estes Valley and increased concentrations of elk in developed areas inside and outside the park increase the potential for human-elk conflict. Draft EIS at vi.

While wildlife and humans can conflict, there is no evidence provided in the Draft EIS that the elk population has or is causing an increase in and/or unacceptable conflicts with humans who live or recreate in the area. Indeed, the Draft EIS reports that elk damage to landscaping (which costs the city of Estes Park some \$12,000 to \$14,000 a year to repair) may actually be generating over \$300,000 for local landscaping companies, that one automobile per month strikes an elk despite a significant increase in traffic volume due to increased development, that 70 percent of residents interviewed reported that elk are an important part of the quality of life in the Estes Valley, and that elk interactions with visitors have resulted in no injuries to date. Considering that this data suggests that there is no conflict between residents of the Estes Valley and elk, the RMNP should not be relying on elk-human conflicts to attempt to justify its proposed elk slaughter.

- E. RMNP argument: Increased concentrations of elk could increase the risk of spreading chronic wasting disease in the elk population. Draft EIS at vi.

Chronic wasting disease is a legitimate concern for the future of elk in RMNP. Even the NPS, however, concedes that it is unknown whether chronic wasting disease is a naturally occurring pathogen in wildlife populations. Draft EIS at 20. If it is naturally occurring, the NPS natural regulation mandate should allow the disease to persist regardless of its potential impact on elk or other species. Disease is known to be a natural factor that can exert control on

wildlife populations. The NPS needs to make a determination as to whether chronic wasting disease is a naturally occurring pathogen and, if it determines it is naturally present in the elk population, it cannot use chronic wasting disease as justification for its elk slaughter plan.

- F. RMNP argument: Elk browsing stunts the growth and kills all young aspen trees on the core elk winter range and in some parts of the Kawuneeche Valley. Draft EIS at vi.

There is little dispute that elk eat aspen in RMNP and that elk herbivory impacts, though natural, is an issue of concern to park officials. What is in dispute, however, is whether aspen is a naturally occurring species in RMNP. Even the NPS concedes in the Draft EIS that “it is uncertain when aspen established in the area that is now RMNP, how its distribution fluctuated, and whether aspen found in the grassland areas of the primary winter range was present prior to elk extirpation by 1880.” Draft EIS at 42 citing Mondello et al. 2005. The Draft EIS goes on to claim, citing Coughenour 2002, that “other modeling has indicated that almost any population size of elk in the park can prevent aspen cohort establishment, and that current stands are primarily a result of aspen expansion while elk were extirpated from the area.” Draft EIS at 47. Though this evidence suggests that aspen only appeared in RMNP after elk had been extirpated from the area and that, conversely, had elk not been extirpated aspen may not have ever become established in the park, the NPS claims that “until further research can refute the hypothesis that the presence of aspen is not a result of elk extirpation, the park would manage aspen on the elk range as a natural component in those areas.” Id. Since this position is inconsistent with the bulk of the evidence about aspen existence in the park, the NPS could have – and should have – taken the opposite position that it would not seek to restore or recover aspen habitat until and unless it was demonstrated that aspen were native to the park.

Alternatively, whether the NPS determined that aspen naturally occur in the park or that aspen only appeared in the park as a result of elk extirpation, it could have elected to protect and recover aspen and its habitat through the use of fencing, habitat enhancement, and other potential strategies instead of resorting to a massive slaughter of elk to restore a species that may not have ever been a natural component of the park. The Draft EIS does not provide a rational explanation as to why the use of fencing is not an acceptable non-lethal alternative to address alleged elk herbivory impacts on aspen. Moreover, even if elk herbivory is impacting aspen regeneration, the Draft EIS fails to identify other factors (i.e. climatic patterns, reduction in soil quality, erosion, disease) that may also be affecting aspen.

- G. RMNP argument: Elk are severely inhibiting the ability of montane riparian willow to reproduce, as few willow plants on the primary winter range produce seed, and seedling survival is almost non-existent. Draft EIS at vi.

Willow is described as the dominant woody shrub on almost all wet meadow or riparian areas in RMNP. *Id.* Elk are a dominant ungulate in RMNP. Elk herbivory impacts on willow, therefore, are to be expected, are entirely natural, and are limited to the core winter range within RMNP. The NPS claims that elk herbivory on willow is severe and excessive and is affecting wildlife habitat for a large number of bird, butterfly, and plant species, *id.*, yet it offers no direct evidence of such impacts beyond comparing willow production between grazed sites and fenced experimental plots. It does concede, however, that there are conflicting results on studies of the impact of elk herbivory on new biomass production and that the average annual offtake of willows attributable to elk is less than the level at which willow are “negatively affected.” Draft EIS at 137.

The problem with comparing vegetation productivity, composition, and abundance data from area open to grazing to areas where grazing is completely eliminated is, as the NPS concedes, that such comparisons do not consider the multitude of variables that affect vegetation growth and diversity, including herbivory itself. The legitimacy of such comparisons is similar to studying a caged tiger and arguing that the behaviors observed in captivity are mimetic of those in a wild tiger. In this case, though the Draft EIS makes it clear that RMNP has one or more fenced experimental plots, it doesn't identify the location of all of the plots, does not indicate how many plots are in areas representative of elk core winter range, does not identify how many plots exist or their size, does not indicate whether the plots are inaccessible to all grazers and browser or just large ungulates, fails to disclose the soil type within each plot, fails to provide precipitation data for the plot or its surrounding area, fails to disclose how many years the plots have been in place and how many years the plots have been monitored, fails to disclose the production, composition, abundance, and trend data for each plot over time, and fails to delineate the topography and drainage patterns on each plot. Each of these factors, and other factors, would have to be monitored or measured to even begin to have a chance to predict the causes of changes in vegetation abundance, composition, and productivity estimates inside of each plot. In addition, though the RMNP is eager to disclose its data documenting alleged elk herbivory impacts to willows and other species, it fails to disclose any information about its monitoring methodology and practices for those specific sites in question. Much of the information identified above for the experimental plots would also be needed for the grazed/browsed areas in order to more accurately compare and contrast result between and among grazed sites and experimental plots. Yet, even the NPS concedes that it has not engaged in routine monitoring of the status of vegetative conditions, beaver populations, or visitor attitudes over the past decade, Draft EIS at 45, and admits that it must collect baseline data at sites not previously evaluated while collecting new data at previously evaluated sites. Draft EIS at 51. Until such

data and information are disclosed, elk herbivory impacts to willow or other species cannot be fully understood.

In regard to willows, the Draft EIS, though conceding that montane riparian willow has been declining over the past 50 to 60 years due to a variety of factors, Draft EIS at vi, fails to disclose what factors may have caused or contributed to this decline and whether those factors have been addressed. While the current condition of riparian willow habitats may be due to elk herbivory, the fact that the decline in willows began long before there were any concerns about elk herbivory, provides conclusive evidence that the elk had nothing to do with the willow's decline. Similarly, if the factors that caused the willow's decline are still in play, then elk herbivory may not be a limiting factor at all. The NPS is legally required to disclose such information and to provide evidence as to whether such factors are still of concern and/or what has been done to address such factors over time. It can't ignore these factors to achieve its self-serving justification for its proposed elk slaughter. Similarly, the RMNP should not even be considering the lethal control of elk until and unless all other non-lethal strategies (i.e. fencing, non-lethal harassment) are attempted.

One of these factors is, according to the Draft EIS, the decline in beavers on the primary winter range. The RMNP claims that a 90 percent decline in beavers on the primary winter range starting in 1939 has led to a 70 percent decline in surface water. Draft EIS at vii. The beaver decline was due to extensive beaver trapping throughout the park in the 1940s. Draft EIS at 18. The reduction in surface water has accelerated montane riparian willow declines by inhibiting the development of appropriate sites for willow seedling establishment and limiting recharge of shallow aquifers. Draft EIS at vii. The RMNP believes that lethal control of the elk population will allow for natural recolonization of the winter range with beaver or, if natural recolonization does not occur, purposeful reintroduction will occur to restore beaver population which, theoretically, will create habitat conditions to allow for the expansion of riparian willow habitat.

The proposal to slaughter elk in RMNP will do nothing to restore beaver populations within the primary winter range. Elk did not cause the decline of the beaver. Rather, humans were responsible as a result of extensive trapping in the park, trapping which clearly was inconsistent with the NPS Organic Act. Beavers won't return to the primary winter range until the habitat, primarily the amount of standing water, is sufficient to support beavers. Killing elk will not increase standing water. The construction of temporary dams to create potential beaver habitat along with some strategic fencing of willows to encourage their growth and maturation would be a far more effective strategy to restore beavers to the primary winter range. Of course, standing water can only be increased assuming precipitation amounts are high enough and that anthropogenic uses of the water or drawdown on the water

table are limited to ensure there is sufficient water available for the beavers. The NPS failed to disclose in the Draft EIS the full range of activities inside and external to the park and the park service that may be adversely affecting the amount of water available to facilitate beaver restoration.

Conclusion:

There are many additional deficiencies, both legal and scientific, contained in the Draft EIS. Such deficiencies include: 1) the NPS misinterpretation of its natural regulation mandate; 2) the NPS failure to collect or disclose additional information needed by the public and agency decision-makers to make an informed decisions; 3) the lack of factual support for the proposed lethal control program since the impact of elk on vegetative communities, if it is even a problem, is extremely limited in its geographic area (and well within what would be considered natural in an un hunted population), since there is no documented adverse impact on birds or butterflies, and since the elk population itself is within the natural range of fluctuation and potentially will decline further as a result of density dependent based food limitations; and 4) the NPS failure to consider the use of a variety of non-lethal strategies (fencing, hazing or herding of concentrated elk, creation of artificial dams) that could and should be used before lethal elk control is even contemplated. These deficiencies are reason enough to abandon the current proposal.

In addition, the NPS has failed to consider a reasonable range of alternatives by neglecting to consider at least one or two alternatives, in addition to Alternative 1, that emphasized non-lethal management strategies. Nor has it evaluated the precedent that could be set by this proposal and how it may affect wildlife management practices throughout the national park system.

To address these concerns, AWI proposes that the NPS consider the following options:

1. Suspend any further work on the Draft EIS;
2. Organize a coalition of federal, state, and local agency officials along with park stakeholder groups to engage in a comprehensive analysis of the existing data, to identify data gaps, and to develop alternative, non-lethal, strategies to address the alleged elk herbivory and other concerns of RMNP officials;
3. Coordinate a workshop of federal, state, university and other scientists engaged in the study of immunocontraceptive and other reproduction suppression techniques to collect the most up to date information on the safety, efficacy, behavioral impacts, and feasibility of all potential reproduction suppression agents and to develop a potential plan to implement a fertility control program if deemed appropriate and necessary;
4. Prepare a new Draft EIS to reflect the conclusions and recommendations made by both the agency/stakeholders and scientist groups referenced above.

Thank you in advance for considering these comments.

Sincerely,

A handwritten signature in cursive script, appearing to read "D.J. Schubert". The signature is written in a dark ink and is positioned above the printed name.

D.J. Schubert  
Wildlife Biologist