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BY ELECTRONIC AND REGULAR MAIL

Ms. Donna Swauger, Environmental Protection Specialist
Catoctin Mountain Park
6602 Foxville Road
Thurmont, MD 21788

Dear Ms. Swauger:

On behalf of the Animal Welfare Institute (AWI), I submit the following comments on the Draft White-Tailed Deer Management Plan and Environmental Impact Statement for the Catoctin Mountain Park (hereafter "Draft EIS").

AWI strongly supports Alternative B, which would increase and expand the use of non-lethal alternatives to manage the deer population within Catoctin Mountain Park (CMP). It strongly opposes the preferred alternative (Alternative C), which would employ sharpshooting and capture and euthanasia techniques to dramatically and rapidly reduce the park's deer population. The National Park Service (NPS) has failed to disclose sufficient evidence or data to substantiate the need for such drastic actions and has failed to provide an adequate evaluation of the direct, indirect, and cumulative impacts of the preferred alternative and other alternatives in violation of the National Environmental Policy Act (NEPA). Moreover, the NPS emphasis on the need for aggressive lethal removal of hundreds of deer over the first three years of the preferred alternative and thousands over the 15-year duration of the plan violates its own Organic Act and regulations and policies implementing that Act.

Given the clear intent expressed by Congress in establishing the NPS that national park units were expected to be managed in a manner far different than other federal lands (U.S. Forest Service lands, Bureau of Land Management lands, U.S. Fish and Wildlife Service lands), it is disturbing that, in this case, the NPS has elected to propose the use of sharpshooting and capture/euthanasia to address alleged adverse impacts to CMP attributable to deer. Given its natural regulation mandate, ideally the NPS should embrace the fluctuating deer population of the CMP as a natural process contributing to natural succession within the park. Indeed, instead of portraying deer as an overabundant pest allegedly causing adverse impacts to park vegetation and other

species, the NPS should recognize deer as a dominant herbivore in the CMP and should consider its impacts to be inherent to the deer's role in the ecosystem.

While admittedly there are impacts associated with allowing nature to take her own course, those impacts are not irreversible and, eventually, the dynamics of the ecosystem will change resulting in a reduced deer population, increased forest regeneration, and an expansion of herbaceous cover. Indeed, based on the evidence contained in the Draft EIS the deer population has fluctuated over time and is presently at a density that is lower than any density estimate of the past six years (though the accuracy of the distance sampling/spotlight survey methodology is highly questionable, and in all likelihood, significantly overestimates deer population numbers). What's unique about a national park is that it is intended to be and, in fact, is required to be a natural laboratory where climate, soils, topography, and air and water quality combine with the biology and ecology of wild species, both floral and faunal, to create a system that is always in flux, where conditions change, and where naturalness (to the extent it can exist in a human modified landscape) continues to prevail.

In this case, instead of embracing its mandate, the NPS prefers to manage CMP to achieve a snapshot in time in which it manipulates deer numbers to achieve what the NPS claims is a desired condition. Such a mindset is similar to the management strategies employed by the U.S. Forest Service or U.S. Fish and Wildlife Service. These agencies extensively manipulate ecosystems to achieve some predetermined objective of what is aesthetically pleasing and/or biologically/ecologically desirable.

This is not to suggest that AWI believes that the NPS should adopt a hands-off approach to the management of the CMP. While the NPS's own data demonstrate that the CMP deer population has constantly fluctuated in number and that the current population density demonstrates that the deer population is significantly smaller than the numbers documented in the past, the use of large exclosures, plant or area-specific exclosures, repellents, and contraceptive technologies is entirely appropriate given the unique circumstances relevant to the CMP. Considering that CMP is not a complete ecosystem, it no longer provides habitat for a complete assemblage of all native predators. Moreover, given that development within and outside of CMP has also created or improved deer habitat and that CMP is surrounded by agricultural lands, residential and commercial development, state parks, and other lands, there could be a valid need for non-lethal deer management both to humanely reduce the deer population and to mitigate some of the species' impacts.

Conversely, given the lack of substantive data and analysis to document the alleged significant impacts that the NPS attributes to deer in the CMP, there is no rational scientific or legal basis to proceed with the proposed action. Indeed, even if the NPS believes that its data are solid, given its statutory requirements it must attempt to address its deer management challenges through the creative use of all non-lethal management alternatives before it resorts to any consideration of lethal control.

Particular deficiencies inherent to the Draft EIS include, as mentioned previously, a failure by the NPS to create a management plan that is in compliance with its own Organic Act and its associated implementing regulations and policies and with NEPA.

Specific NEPA inadequacies include a failure to disclose all relevant information to facilitate both public review and meaningful participation in the decision-making process and the ability of NPS decision-makers to have all of the relevant environmental information available to them prior to rendering a decision on the plan. The lack of information also weakens the alleged purpose and need for the proposed action since the alleged need cannot be justified based on the existing data. The NPS has also failed to consider a reasonable range of alternatives, failed to provide a sufficient evaluation of the environmental impacts of the preferred alternatives and other alternatives, and rejected legitimate alternatives from serious consideration.

These and other inadequacies in the Draft EIS will be discussed in more detail throughout the remainder of this comment letter.

1. National Park Service Organic Act, Regulations, and Policies:

Congress created the NPS in 1916. The fundamental responsibility of the NPS as plainly stated in the NPS Organic Act is to "promote and regulate the use of … national parks … by such means and measures as conform to the fundamental purpose of said parks … which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." 16 USC §1. More recently, Congress reemphasized its support for the NPS and the importance of national parks reiterating its direction that "the authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various area have been established, except as may have been or shall be directly and specifically provided by Congress." Id. at §1-1a.

Though the statute clearly limits the "impairment" standard to the regulation of public uses of the parks, the NPS has expanded the applicability of that standard to include its own administrative activities. As a consequence, though this standard largely applies to public uses of the parks, the NPS is supposed to make a determination as to whether its own actions cause an impairment. In the Draft EIS, however, the NPS appears to further expand its application of the impairment standard to include activities that naturally occur within any national parks such as grazing, wildlife health, and interspecific competition.

For example, in its summary of the environmental consequences of each alternative, the NPS claims that selection of the no-action alternative would cause an impairment to park vegetation, white-tailed deer health, other wildlife species, and rare species. In other words, the NPS apparently believes that deer grazing and browsing, natural changes in deer health parameters, factors affecting other wildlife species, including rare species, all constitute impairments. Yet, all of these impacts represent entirely natural components of the ecology of an area and most certainly do not constitute a use or administrative activity that is subject to the impairment standard. Though the NPS has misinterpreted the intent of its impairment standard, it must be noted that, as the NPS concedes, the selection of Alternative B will not result in any alleged impairments to park resources. Since impairments are not permissible, the NPS is effectively but erroneously claiming that its

lack of action would result in an impairment because deer would continue to eat herbaceous and woody materials on CMP. This would be akin to the NPS claiming that its failure to kill predators in a national park would constitute an impairment since the predator could kill a federally protected species or that a decision to allow natural factors to control the elk population in Yellowstone represents an impairment because of the potential impact of elk herbivory on willows and beavers.

Congress provided the Secretary of the Interior with the authority to adopt regulations to guide management of the National Park System. Through such regulations and/or in the Secretary's discretion, timber cutting may be permitted to control insects, diseases, or to conserve scenery, and livestock can be allowed to graze in all national parks except for Yellowstone National Park if not detrimental to the primary purpose of the park. Id. at 3. Moreover, the Secretary may also provide "for the destruction of such animals and of such plant life as may be detrimental to the use of any of said parks, monuments, or reservations." Id. (emphasis added).

The authority given the Secretary to allow for the destruction of an animal is not associated with the impairment standard, but rather pertains to a determination that the animal is detrimental to the use of a park. Thus, the fact that deer may be adversely affecting forest regeneration in CMP does not justify a finding of "detriment" since forest regeneration is not considered to be a "use" of a park. Rather, the Secretary's authority to permit the destruction of animals detrimental to the use of a park was provided so that animals who pose a threat to persons using a park (e.g., grizzly bears, black bears, mountain lions, and other dangerous animals such as rabid animals) could be destroyed. As a consequence, the NPS, despite whatever impacts it believes deer may be having on CMP, cannot authorize the lethal control of deer in CMP unless the presence of the deer is deemed to be detrimental to the "use" of the park. No evidence is contained in the Draft EIS that would satisfy this standard and, therefore, the NPS cannot legally approve Alternatives C or D as described in the Draft EIS.

NPS regulations provide additional guidance on whether lethal wildlife control may be permissible. Though the NPS cited to its regulations in the Draft EIS, it provided no further discussion of the regulations and their relevance to the alternatives being considered in the Draft EIS. As an initial matter, disturbing living wildlife from "its natural state" is prohibited. 36 CFR §2.1(a)(1)(i). This is consistent with the NPS natural regulation mandate. Hunting of wildlife in a national park, however, is allowed "where such activity is specifically mandated by Federal statutory law," id. at §2.2(b)(1), or where the activity "is specifically authorized as a discretionary activity under Federal statutory law… ." Id. at §2.2(b)(2). Though these specific regulations may not be applicable to activities carried out by NPS personnel, they reflect a clear intent on the part of the NPS, as directed by its Organic Act, to significantly limit the lethal control of native wildlife to those very few instances where Congress has authorized such activities and/or where the NPS has the discretion to allow such uses. As explained previously, the discretion provided by the Organic Act to allow the destruction of wildlife is limited to circumstances where an animal is determined to be detrimental to the use of a park.

NPS policies provide further guidance on the impairment standard and on the natural regulation mandate governing the management of national parks.

In the 2006 NPS Management Policies, policy 1.4.3 and 1.4.3.1 very clearly associate the impairment standard to authorized uses of the parks. Policy 1.4.4 specifies that "the impairment of park resources and values may not be allowed by the Service unless directly and specifically provided for by legislation or by the proclamation establishing the park." Policy 1.4.5 explicitly identifies visitor activities, NPS administrative activities and other activities by concessionaires and others as the types of activities that can cause an impairment. Policies 1.4.6 and 1.4.7 provide additional evidence of why the impairment standard is applicable only to uses of or activities in parks and cannot be applied to impacts to park resources that may be attributable to a naturally occurring species or to processes found or operating in national parks. Finally, policy 1.5 clearly states that the NPS "must ensure that park uses that are allowed would not cause impairment of, or unacceptable impacts on, park resources and values. These policies do not permit the NPS to categorize, as it has done in the Draft EIS, impacts that occur as a result of natural processes in any park ecosystem to constitute an impairment. Therefore, the NPS cannot discount the no action alternative during its decision-making process based on any claim that its selection would cause an impairment.

NPS policy specifies that "natural resources will be managed to preserve fundamental physical and biological processes, as well as individual species, feature, and plant and animal communities." Policy 4.1. The intent is not to solely preserve individual species (except threatened or endangered species) or individual natural processes but to "maintain all the components and processes of naturally evolving park ecosystems, including the natural abundance, diversity, and genetic and ecological integrity of the plant and animal species native to those ecosystems." Id. To achieve this standard "natural change will … be recognized as an integral part of the functioning of natural systems." Id. Natural resources, processes, systems, and values found in parks include physical processes such as weather, biological resources such as native plants, animals, and communities, and biological processes such as photosynthesis, succession, and evolution. Policy, Chapter 4, Introduction.

The NPS can only intervene to affect natural biological or physical processes when directed by Congress, in emergencies, "to restore natural ecosystem functioning that has been disrupted by past or ongoing human activities," or when a park plan has identified that intervention is necessary to protect other park resources, human health and safety, or facilities. Policy 4.1. While there are limited circumstances when the NPS can intervene, whenever possible it should allow "natural processes … to maintain native plant and animal species and (to) influence natural fluctuations in populations of these species." Policy 4.4.2. Such interventions are also limited to circumstances where the impacts of such actions will not cause unacceptable impacts to the populations of the species or to other components and processes of the ecosystems that support them, id. and Policy 4.4.2.1, and when a population occurs in an unnaturally high or low concentration as a result of human influences. Id. The policy goes on to make clear that lethal animal control actions can be taken to reduce an animal population but only if "visitor use or other human activities cannot be modified or curtailed." Policy 4.4.2.1. However, whenever the reduction of a park plant or animal population is determined to be needed, NPS policy requires the use of "scientifically valid resource information obtained through

consultation with technical experts, literature review, inventory, monitoring, or research to evaluate the identified need for population management…" Id.

Admittedly, NPS policies are conflicting on when or if native animals can be lethally removed from a park. On the one hand, the NPS claims to promote natural processes including natural abundance, diversity, and succession. While, on the other hand, the NPS permits the removal of native species to restore natural ecosystem functions and/or address a population that occurs in an unnaturally high or low concentration as a result of human influences if such influences cannot be mitigated. The Policies do not specify what constitutes a "human activity" or "human influence" though the policy language suggests that these terms refer to visitor use or other similar human activities and do not include long-term human alterations to the landscape that may have created the environment for changes in the deer population within the CMP. The purposeful introduction of a native but non-endemic species into a park lake would, for example, clearly justify intervention by the NPS to restore natural ecosystem functions. In the case of CMP and its deer, however, there is no specific human influence that has caused the fluctuations in the CMP deer population. Rather, a series of human actions over more than 100 years (i.e., clearing of land for agriculture, residential and commercial development, road construction both inside and outside of the park, a decrease in hunters) have allowed deer populations to increase throughout most suburban and rural areas throughout the United States. Moreover, in the case of the CMP, its very designation as a unit of the NPS, created the opportunity for natural deer population fluctuations though this action should not and cannot be classified as having negative or adverse consequences.

Though the Policies specify that the NPS must have credible scientific data and evidence to justify the removal of native plants or animals from a park – a standard that the NPS has not met in the Draft EIS, the Organic Act, as explained previously, only allows the Secretary to authorize the destruction of an animal when it is determined that the animal is detrimental to the use of a park. Thus, there must be a valid conflict between an animal and public use of a park before the Secretary can authorize the destruction of the animal. The NPS has offered no evidence of such a conflict between deer in CMP and public use of the park in the Draft EIS and, therefore, it can't proceed with any lethal removal of deer without violating federal law.

Though the Organic Act explicitly limits when the NPS can lethally remove animals from a park, the Draft EIS completely ignores this issue. Instead, the NPS claims that the original Executive Order (#7027) establishing the Catoctin Recreational Demonstration Area and it relies principally on this alleged justification to substantiate its proposed lethal deer control plan. Though EO 7027 could not be located to review prior to preparing these comments, there is a question as to whether the forest regeneration requirement contained in the original EO remained applicable to the management of CMP once that property was transferred to NPS given natural regulation mandate contained in NPS statutes, regulations, and policies. Furthermore, by citing to CMP management objectives, goals, the CMP Resource Management Plan, and the CMP Statement for Management, the NPS claims that lethal deer control is essential for the restoration of forest regeneration, which is apparently included in each of those documents as a critical management goal. What's unclear is whether those plans are

consistent with NPS statutes, regulations, and policies and whether the public was involved in the process used to create those documents. Even if the NPS can legitimately rely on the original intent of EO 7027 to justify its interest in lethal deer control, considering its statutory obligations, Alternative B remains a valid alternative that the NPS must select to partially meet its stated objectives and facilitate forest regeneration while also complying with its own legal mandates.

As the foregoing discussion demonstrates, there remain serious questions about the NPS proposal to lethally control deer within the CMP and whether such plans are consistent with NPS statutes, regulations, and policies. Based on its statutory obligations alone, the NPS does not have the authority to kill deer within CMP unless it can prove that deer are detrimental to the use of the park.

2. National Environmental Policy Act:

The National Environmental Policy Act (NEPA) requires federal agencies to evaluate the environmental impacts of their actions before proceeding with the implementation of new programs, plans, or projects.

The NPS reports that the purpose of its proposed action is "to develop a deer management plan that supports forest regeneration and provides long-term protection, conservation, and restoration of native species and cultural landscapes in Catoctin Mountain Park." Draft EIS at 3. The alleged need for the action is due to "excessive deer browsing" reducing forest regeneration and "resulting in adverse changes to the forest structure, composition, and wildlife habitat" and to address a potential adverse impact on the natural distribution, abundance, and diversity of native species, including species of special concern as a consequence of deer browsing. Draft EIS at 3. To justify this need the NPS provides information about the deer population size and density, deer impacts on woody vegetation, deer impacts on rare species, deer health, and socioeconomic impacts to adjacent landowners. In addition, though not directly relevant to the purpose and need statement, the NPS includes information about visitor use and deer impacts to socioeconomics of the area in the Draft EIS. The problem, however, is not primarily with what is disclosed but rather, what the NPS has failed to disclose.

Though an EIS is intended to provide a comprehensive review of the direct, indirect, and cumulative impacts of an action and is required to contain a sufficient level of detail to ensure that interested stakeholders, the public, and agency officials can understand both the need for the action and the action's environmental consequences. Therefore, the disclosure of all relevant information is crucial to insure that the public can meaningfully participate in the decision-making process by submitting informed and substantive comments, thereby providing decision-makers with all relevant information before determining the course of action to pursue. In this case, it appears that the NPS was so sure of what action was required that it neglected to disclose all relevant information, evidence, and data. Considering the efforts made by the NPS to denigrate white-tailed deer claiming that deer are responsible for a whole host of problems in CMP, the NPS may have predetermined the outcome of this process.

Failure to Disclose Relevant Data, Evidence, or Information:

Examples of what the NPS has either failed to disclose or for which sufficient evidence or data was not presented include:

A. Climate data. It is indisputable that climate, and particularly the amount and timing of precipitation, has a direct and significant impact on vegetation productivity. An abundance of timely precipitation can substantially increase primary production thereby supporting a larger number of animals, like deer and other herbivores and omnivores. Precipitation amounts can also affect the abundance and composition of floral species both positively and negatively. Drought, extreme heat, or even extreme cold can dramatically impact vegetation production, composition, and abundance.

The Draft EIS contains no information about the long or short-term climate trends affecting CMP. There are no data presented on precipitation amounts, type, or timing nor is there any analysis of how precipitation affects the production, abundance, and composition of both woody and herbaceous vegetation in CMP. This deficiency is noticeable since the NPS identifies other factors (i.e., disease, ozone) that adversely impact park trees, shrubs, and other forage species. Considering how climatic variables can impact vegetation production, composition, and abundance, the short and long term ecological implications of a warming climate on forest and forage species, and how habitat productivity directly affects the ability of the ecosystem to sustain wildlife, the lack of climate data and analysis in the Draft EIS is a significant flaw.

B. Deer population numbers, density, and counting methodology: If the NPS selects and implements Alternative C, it estimates that it will kill 1518 to 2118 deer over the lifetime of the 15 year plan. This would include the killing of 468 deer within the first three years of the plan so that the NPS can reduce deer density in CMP from 104 to 15-20 per square mile to ostensibly achieve its goal of forest regeneration. While the legitimacy of the estimated deer density needed to achieve forest regeneration and the relevance of the forest regeneration objective in light of NPS policies will be discussed in detail below, the NPS has failed to disclose sufficient data or to provide an adequate explanation to justify its deer population numbers, density estimates, and its deer counting (census) methodology.

As revealed in Appendix C the number of deer in CMP has fluctuated dramatically over the years. See Table 1. Indeed, even when the NPS switched its counting methodology

Table 1: Deer population/density estimates and counting methodologies:

Year	Deer Population Estimate	Counting Methodology	Calculated deer population park-wide
1983	70	Winter aerial census	
1986	131	Winter aerial census	
1987	117	Winter aerial census	
1989	324	Winter aerial census	
1992	277	Winter aerial census	
1993	127	Winter aerial census	

1994	217	Winter aerial census (January)	
1994	107	Winter aerial census (March)	
1995	138	Winter aerial census	
1997	264	Winter aerial census	
1999	300	Winter aerial census	
2000	312	Winter aerial census	
2001	147.37/square mile	Spring distance sampling/spotlight	1338.11
2001	185.83/square mile	Fall distance sampling/spotlight	1687.34
2002	112/square mile	Spring distance sampling/spotlight	1017
2002	155.43/square mile	Fall distance sampling/spotlight	1411.30
2003	159.72/square mile	Spring distance sampling/spotlight	1450.26
2004	104.11/square mile	Fall distance sampling/spotlight	945.32
2004	128	Winter aerial census	
2005	74.5/square mile	Fall distance sampling/spotlight	676.46

from winter aerial censuses to distance sampling/spotlight surveys, deer density has ranged from a high of 185.83 deer/square mile in the fall of 2001 to 74.5 deer/square mile in the fall of 2005. Though the NPS has not, as explained below, adequately discussed a number of important issues associated with the deer population/density estimate methodologies, its own data (assuming that the distance sampling method is valid) demonstrates that the CMP deer population has naturally declined by more than half between fall 2001 and fall 2005. While there may be a variety of causes for this decline, one likely explanation is that the deer population is dropping in response to habitat conditions. While the changing habitat conditions may be, in part due to the deer themselves, a number of other factors (i.e., climate, tree disease, pollution) also contributed to these conditions. While it is impossible to predict if the deer population will continue to decline, given the recent trend and NPS statutory mandates to allow nature to take its course to the greatest extent possible, the population data provide ample justification and, indeed, require the NPS to elect to use non-lethal strategies (i.e., Alternative B) to achieve its management objectives in CMP.

The NPS fails to provide any rational explanation for its decision to switch deer counting methodologies in 2001 from the use of aerial censuses to distance sampling/spotlight surveys except to claim that the distance sampling/spotlight survey methodology is more accurate. Draft EIS at 117. Since the distance sampling/spotlight surveys significantly increased the estimated deer density and population numbers over the results obtained from the aerial census methodologies, the NPS has to provide some explanation for why it chose to change methodologies, the differences between the two methodologies, and whatever assumptions are inherent to both methodologies and whether they were or were not met. In 2000, for example, the NPS counted 312 deer during an aerial census in the

winter yet in the spring of 2001, based on the density estimate obtained from the distance sampling/spotlight survey, a total of 1338 deer were estimated to live in CMP. Similarly, in the fall of 2004 an estimated total of 945 deer were estimated to live in CMP based on the deer density estimate obtained that fall while a few months later only 128 deer were counted during an aerial census. With these data, either the aerial census methodology significantly underestimated the deer population or the distance sampling/spotlight survey methodology significantly overestimates the deer population.

Based on a description of the distance sampling/spotlight survey methodology given in Appendix F, there is ample reason to believe that this methodology is significantly flawed and has resulted in an overestimate of the size of the park's deer population. The information in Appendix F indicates that this methodology relies on a team of three persons who drive survey routes after sunset to count deer. When deer are encountered, the distance to the original location of the deer or group of deer is determined using a laser rangefinder. This methodology raises a number of concerns. First, can laser rangefinders provide accurate distance estimates in the dark particularly if the deer have moved and can no longer be used as the target for distance measurement? Second, how does the non-random use of roads or other trails passable by vehicle bias or influence the results of this methodology? Even the NPS concedes that studies involving the use of roads to count deer present a "risk of bias from unrepresentative sampling of available habitats" (citing Buckland et al. 2001; Hiby and Krishna 2001) and that few studies have been conducted to determine whether such bias exists when roads are used for sampling. Though the NPS did not disclose which CMP roads were used for counting deer using this methodology, it is possible that this methodology could easily and substantially overestimate deer density and, subsequently, deer population size due to the fact that deer tend to be attracted to road shoulders because of the availability of increased vegetation along roadways.

If the NPS intends to rely on these deer density estimates to justify its proposed management actions, it must provide a far more substantive explanation about this methodology, its benefits, its drawbacks, and a justification for choosing this counting technique over others. Moreover, the NPS must explain whether the practice of conducting deer surveys in CMP along park roadways results in a bias in the deer density estimates. If so, does the NPS correct for the bias? How so? If not, why do agency officials ignore or discount the bias? Until and unless the NPS engages in this type of analysis, it must select non-lethal strategies (i.e., Alternative B) to manage the park's deer population.

C. Other wildlife species. The NPS claims that the deer have adversely impacted both woody vegetation and herbaceous species and that, in turn, other species including foxes, hawks, owls, skunks, raccoons, mice, rabbits, ground-nesting birds (ovenbirds, black-and-white warblers, worm-eating warblers), snakes, and frogs may be beneficially or adversely affected. Draft EIS at 210. Despite these claims the NPS offers no CMP-specific evidence that any of these other species, including species not listed above, are either increasing or decreasing within CMP.

Indeed, one piece of evidence the NPS points to in regards to its claim that ground nesting birds have declined in the park is a comparative study of CMP and Frederick City

Watershed in which the number of bird species observed was higher in the Watershed. Draft EIS at 126. Allegedly the Watershed had a lower deer density and greater forest regeneration though the NPS did not disclose what the differences were between the deer densities in the two locations, what level of forest regeneration was measured in the Watershed, the history of the Watershed and of deer use therein, the presence or absence of tree diseases within the Watershed, the type and density of predators in the Watershed, and what impact edge effects may have on bird species within the Watershed, or whether climatic patterns or soil type/health in the Watershed was more conducive to forest regeneration and forage production. Indeed, the relationship between birds, deer, vegetation, and other factors is far too complex for the NPS to claim that deer density and forest regeneration are the only factors that differ between the two facilities.

The NPS also claims to have observation records indicating that wild turkey numbers have declined in the 1990s, Draft EIS at 123, but neither the accuracy of those observation records, the methodologies used to collect such data, or the data are presented in the Draft EIS. Interestingly, according to Sinclair (2002), 162 bird species have been documented in the park with several newly identified or unexpectedly identified species. Draft EIS at 123. Although there may be studies in which deer density is correlated with a decline in bird species diversity, do these studies consider all possible explanations (other than deer) for the documented decline in diversity? Furthermore, the NPS has provided no data to suggest that such a decline has occurred or will occur within CMP. Finally, though the NPS, citing to Warren and Ford (1990), reports that "numerous bird species have already declined significantly in number or vanished from the park because of the effect of overbrowsing by deer on the understory and shrub cover in the forest," it fails to identify which bird species have disappeared from the park suggesting that Warren and Ford (1990) may have exaggerated their conclusions.

The NPS fails, however, to provide any CMP-specific population data or trend evidence for any of the species that it claims are being adversely impacted by deer grazing and browsing. If foxes, hawks, owls, and skunks benefit from more open space, data should be presented documenting increases in the number of these species. Similarly, if mice, rabbits, ground-nesting birds, snakes, and frogs have been adversely impacted by deer, data must be presented to substantiate such claims. Moreover, the NPS must also disclose any other factors (i.e., disease, edge effects, climate change, predation) that may be at play in CMP that may be causing a decline in these species independent of deer. If such data are not available then the NPS cannot use this argument to justify its selection of any alternative that calls for the lethal control of the deer population.

D. Vegetation productivity data and monitoring methodologies. Throughout the Draft EIS the NPS repeatedly blames deer for preventing forest regeneration in CMP and otherwise adversely impacting vegetation production, composition, and abundance. Since at least 1990 the NPS has reportedly been engaged in vegetation monitoring. Over that time, monitoring expanded from 45 sampling plots used in 1990-1994 to deer exclosures constructed and sampled in 1997, with additional comparison studies conducted in 1999 and 2003. Not surprisingly, when exclosure data were compared to open areas, the diversity, abundance, and production of plants inside exclosures was higher than in those areas available to deer.

While the NPS vegetation study findings are not surprising, the NPS failed to disclose the methodologies used by the NPS in establishing its vegetation monitoring plots and the methodologies used in the vegetation monitoring studies conducted in CMP. There is no explanation, for example, of how the NPS selected locations for the vegetation monitoring plots and deer exclosures. What are the characteristics of each site (i.e., soil type, species diversity, canopy cover, slope, aspect, leaf litter depth, presence of exotic species, precipitation patterns)? Without disclosing that type of information for each monitoring plot or exclosure, it is difficult for the public to determine if such sites are appropriate for conducting long term monitoring of the vegetation in CMP.

In addition, the NPS failed to explicitly disclose the methodologies used to monitor species presence, absence, production, and abundance at each monitoring plot or exclosure. The Draft EIS, for example, contains some data on forest regeneration or lack thereof, but there's no explanation as to the methodologies used to collect such data except for a minimal description of how seedlings 10-60 inches in height are sampled in the park. Draft EIS at 333. Suspiciously, though the NPS claims that deer are adversely impacting herbaceous vegetation, there is a lack of data about herbaceous vegetation in the Draft EIS.

Indeed, other than including a 1985 summary of browsing impacts to Catoctin vegetation in Appendix A, the NPS fails to present any other data (except for some limited and general forest regeneration data) pertinent to vegetation abundance, composition, or production in the Draft EIS. The evidence that the NPS does present generally consists of quotes from research papers or broad statements suggesting the deer are eating everything in the forest. Without the disclosure of both the methodology used in each study and the resulting data, the public has no way of verifying such statements. There is, however, evidence to suggest that maybe the situation is not as dismal as purposefully portrayed by the NPS. For example, on page 19 of the Draft EIS the NPS reports that "in general, plant diversity was higher within exclosures than in the paired plots outside the exclosures" suggesting that there may be some data that are not consistent with this general observation. Similarly, on page 139 of the Draft EIS, the NPS reports that deer browsing has decreased the flower bloom in some areas of the park suggesting that flowering plants may be holding their own in other areas of the park even though, using the NPS deer density estimates, the deer population is well above what the NPS deems desirable.

This data deficiency is particularly alarming considering that the NPS cites several studies that reportedly documented tree or other vegetation decline within CMP. See Draft EIS at 106. The NPS provides no explanation for why it chose not to present all of its vegetation monitoring data in the Draft EIS. Instead, the NPS apparently prefer that the public simply believe its interpretation of the studies and data instead of providing proof of such vegetative impacts in the form of monitoring data. Interestingly, though the NPS failed to disclose vegetation monitoring data, it did include water quality data in the Draft EIS (see page 115) suggesting that the NPS cannot possibly claim that disclosure of the vegetation monitoring data would be too difficult for the public to understand.

The NPS claims that park staff has noted evidence of deer browsing impacts since the 1980s, Draft EIS at 104, and that foliage damage and impacts on plant reproductive success have been identified for 24 plant species. Draft EIS at 104. It relies extensively on Langdon (1985) to suggest that such browsing impacts can impact plant reproduction, alter species composition, and cause the extirpation of palatable yet uncommon species in the park. Draft EIS at 105. The NPS goes on to claim that a comparison of vegetation surveys from the 1970s with a survey conducted in 1992 revealed that at least 12 species had been reduced or eliminated from the park. What the NPS doesn't discuss is what role other factors (i.e., plant disease, soil health, other herbivores, pollution impacts, climate change, visitor use activities, suppression of fire) may have played in leading to these alleged declines or local extirpations. In addition, the NPS has not disclosed whether any of the alleged extirpated species have been identified in the existing deer exclosures, and how the methodologies of any studies conducted to measure presence/absence or trend in plant species may have differed, thereby affecting the study results and whether or not such results could be legitimately compared with the results of other studies.

The NPS does concede that there are other factors that may be adversely impacting trees and other vegetation in CMP. See Draft EIS at 175 ("The health of Catoctin's forest has been and continues to be adversely affected by disease, blight, and exotic pests…"). For example, the Draft EIS reports the chestnut blight, Draft EIS at 24, 100, dogwood anthracnose, Draft EIS at 23, gypsy moths, Draft EIS at 24, hemlock woolly adelgid, Draft EIS at 24, and ozone have killed or damaged a number of trees. Indeed, dogwoods have declined tremendously in CMP. Chestnut trees also continue to die as a result of chestnut blight while hardwood trees are adversely impacted by gypsy moths. Ozone concentrations, which are high in the Washington DC area and the park, have adversely affected a variety of species in the park including basswood, white pine, sweetgum, sycamore, black cherry, pin cherry, and sassafras. Beyond these concessions, however, the NPS fails to discuss the relationship between these impacts and deer on CMP vegetation and/or how it can distinguish between a lack of forest regeneration caused by disease or insects versus deer. Indeed, without the disclosure of vegetation monitoring data, it is impossible for the public to determine what species are being most dramatically impacted by deer and/or if there is evidence available to distinguish between deer, disease, and insect impacts to native trees and other vegetation.

The NPS also concedes that the suppression of fires within CMP will adversely impact the health of fire-dependent vegetative communities like those that exist within CMP. Though natural fire frequency within CMP is estimated to occur within intervals of 6 to 20 years, Draft EIS at 24, current policy is to suppress fires. Draft EIS at 25. As a result of suppression over the past 60 years, there has been a dangerous buildup of a fuel load containing dead trees and limbs posing a serious threat to the remaining vegetation as a result of a particularly hot fire. The NPS claims that prescribed burning may be used as a management tool in the future but fails to disclose a burning schedule. The NPS also fails to consider the lack of fire in conjunction with disease, insects, and deer in determining the proportional impact of each on vegetation production, abundance, and composition.

In regard to rare (state-listed) species, AWI supports the protection and restoration of such species but does not believe that lethal deer control is required to achieve such

objectives. First, the NPS has failed to discuss whether state law requires it to amend its management practices to protect and restore state-listed species. Nevertheless, all protections possible should be afforded to such species by enclosing individual plants, collections of rare species occurring together, and habitat both occupied and suitable for such species with fencing. Of course, active management through actual restoration efforts (i.e., replanting) may be required for those species whose seed dispersal mechanisms do not facilitate recolonization of available habitat.

Failure to Adequately Evaluate the Environmental Consequences of the Proposed Action:

A. Deer population numbers. Throughout the Draft EIS, the NPS repeatedly relies on its 2004 estimated deer density and deer population estimates when evaluating the impacts of its proposed action and its alternatives. For example, the NPS estimates that it may remove up to half of the deer (or 468 deer) in the park during the first year of the proposed kill if the preferred alternative is selected. Draft EIS at 63. These numbers reflect the 2004 deer density estimate of 104 rather than the 2005 deer density estimate of 75, which (assuming the distance sampling/spotlight survey methodology is accurate) corresponds to a park-wide deer population of 676. Similarly, in its evaluation of Alternative A, the NPS claims that the deer "population would continue to vary depending on conditions; however, the general trend toward increased numbers would continue."[1] Draft EIS at 202. As Table 1 indicates, however, there is no general trend of increase in the deer population as the population size has greatly fluctuated even over the last six years. Such inaccurate statements suggest a bias on the part of the NPS against the deer and clearly indicate an attempt to mislead the public about the consequences of not selecting Alternative C.

B. Visitor use: As previously stated, the NPS Organic Act makes clear that the Secretary only has the discretion to approve the destruction of an animal in a park when that animal is determined to be detrimental to the use of the park. Thus, in order to authorize the lethal deer control within CMP, the NPS must prove that deer are detrimental to public use of the park. The NPS has provided no evidence that deer are indeed detrimental to public use of the park.

Based on a visitor use survey conducted in CMP, the NPS determined that the most common activity (82% of respondents) in CMP is viewing wildlife and scenery. Draft EIS at 244. The majority of those respondents rated viewing birds as the most important type of wildlife and 93% of all visitors rated bird watching as moderately to extremely important. Draft EIS at 245. Forty-six percent of CMP visitors ranked viewing deer as extremely important with another 43% reporting that viewing deer was moderately to very important. Draft EIS at 245. In other words, 89% of CMP visitors ranked viewing deer as moderately to extremely important. Finally, 97% of CMP's visitors ranked viewing native plants was moderately to extremely important. Draft EIS at 245. Though visitor use surveys are notoriously unreliable in accurately predicting public preferences, interestingly the NPS did not include a copy of its survey as an appendix to the Draft EIS,

[1] See also, Draft EIS at 117 "based on observations between the early 1980s and the present, the deer population has continued to increase, and in the absence of any population management measures, this increase is expected to continue over time, with some fluctuations due to weather and other factors."

preventing the public from determining the objectivity of the survey questions and, therefore, the accuracy of the survey results.

Nevertheless, the NPS attempts to use the statistics obtained through its visitor use survey to identify the percentage of visitors likely to be adversely impacted if the NPS selects a no killing alternative. This is simply inaccurate and represents an act of statistical game-playing by the NPS in its attempt to vilify deer to generate increased support for its proposal. Since the NPS never apparently polled its visitors about their opinions about deer, the alleged impacts of deer on forest regeneration, or the alleged impacts of deer on other species, it can't make any presumption about how its visitor opinions or visitor use patterns will change depending on which alternative it selects. Interestingly, though the NPS reports that controlling the deer population was one of three management activities that received the highest "always appropriate" rating by visitor groups, Draft EIS at 140, the NPS did not disclose the actual survey data on this question nor did it disclose the actual content and context of the question. For example, it is not known if the deer control question referred to lethal or non-lethal management. As a result, it is impossible for the public to understand how visitors may have interpreted this question, and, in turn, what the "always appropriate" determination may mean in regard to deer management within CMP. Moreover, the NPS apparently never asked a visitor whether he/she would continue to visit CMP if bird numbers declined, if there was little evidence of forest regeneration, or if there was a reduction in the number of density of spring flowers.

Thus, even if the deer population were to increase and if it adversely impacted forest regeneration, the NPS has no evidence to suggest that this would alter public use of CMP. Indeed, if anything, the fact that visitor use of CMP has trended upward with an increase in visitation by 35.7% in 2003, another increase of 12.6% in 2004, and is predicted to continue to increase by 3 percent each year, Draft EIS at 247, would suggest that that CMP visitors are more interested in an outdoor experience in a national park with the opportunity to observe wildlife in a natural setting subject to natural ecological processes than they are in avoiding such visits because of alleged deer impacts. Without specific and irrefutable evidence that deer are detrimental to public use of CMP, the NPS has no legal authority to engage in the lethal control of this species and must select an alternative that relies on non-lethal management strategies.

C. Deer health. The NPS repeatedly refers to the declining health of the CMP deer population as additional evidence of why it must intervene and significantly reduce deer density and population in the park. The NPS argues the "poor herd health indicates that the habitat has been stressed and is no longer supporting healthy deer." Draft EIS at 118. It could just as easily be argued that the evidence of declining deer health is consistent with the process of natural regulation within a national park. Though the number of deer sampled over the years to assess herd health has been limited, as the overall population has fluctuated over time and as habitat conditions have changed, it is completely understandable that deer herd health would decline, and, in time, will improve. This natural process does not require intervention. Rather, it requires patience, persistence, and a commitment by the NPS to comply with its own statutes, regulations, and policies. The NPS is under no legal or moral obligation to improve deer health. Indeed, assuming the herd health is in decline, the NPS should embrace this as a perfect example of how

the management of parks is different than the management of other state or federal lands and explain to its visitor why natural regulation is a valid form of management.

If the NPS elects to rely on deer health as a justification for selecting a lethal deer control alternative, it must provide a rational explanation for why it believes it is responsible for the overall health of its deer population and how this is consistent with its legal mandates.

D. Socioeconomic impacts. Consistent with its overall efforts to vilify the deer in CMP, the NPS provides evidence of deer impacts to the socioeconomics of the region as a result of alleged damage to agricultural interests and residential landscaping. Very little, if any, of this data is specific to CMP. Rather, the NPS relies on general survey and other data from Maryland -- generally, Frederick County, and New York. As a result, while the NPS reports that 36.3 percent of lands surrounding CMP are primarily agricultural and that 27.2 percent are residential, Draft EIS at 149, and broadly estimates potential economic losses based on deer impacts, the Draft EIS contain no specific data on crop losses among agricultural producers living adjacent to CMP. Indeed, the only general evidence disclosed of alleged impacts to farmers and residential home owners was from a public meeting held by the NPS though no specific data (number or proportion of affected farmers, landowners or owner-specific economic damage estimates) were disclosed preventing the public from understanding the extent of the concern over deer.

Even if it had this data, it would have to also disclose whether the farmers have attempted to use non-lethal deer control strategies, what techniques have been tried, whether lethal control actions are used, and the total revenue generated by affected farmers so that the public can better understand the degree or severity of the alleged problem, the economic loss, and potential solutions. Similar data should have also been provided for all residential landowners, including both those who have and have not complained about deer impacts to their landscaping efforts. Without such site-specific economic loss data, the NPS reliance on estimates of potential loss of different types of agricultural crops under various hypothetical conditions associated with deer population growth, distribution and movements, and habitat use patterns is completely speculative and may inappropriately and unnecessarily affect public perception of deer. The NPS must not rely on such speculative data to justify the removal of deer from CMP and/or to predict how deer removal may impact local farmers or landowners.

More fundamentally, the NPS should have included a discussion of whether it has a legal responsibility to address or even evaluate the alleged socioeconomic impacts attributable to park wildlife to landowners adjacent to a park. While the NPS must strive to be a "good neighbor," the NPS does not have the legal authority to lethally manage park wildlife due to alleged impacts to adjacent landowners caused by park wildlife. Even if the NPS can provide a justification for even considering the economic impact of deer on adjacent landowners, its analysis was entirely one-sided in that it only considered the adverse economic impact of deer. The reality is that the park itself, its deer, and other natural features likely provide a significant economic benefit to the region. At a minimum, such beneficial impacts should have been considered in conjunction with alleged adverse economic impacts so that the public could better understand the net economic impact of the park to the region.

E. Deer density. The stated objective of the NPS in developing a deer management plan for CMP is primarily to promote forest regeneration. Throughout the Draft EIS the NPS relies on various deer densities from the scientific literature to attempt to justify its proposed lethal control program (Alternative C). For example, it reports that "deer density should be 20-40 animals per square mile in unmanaged areas and 15-18 in timber managed areas (Tilghman 1989)," that "tree regeneration fails with deer densities at 36 deer per square mile," and that "seedling richness begins to decline with just 10 deer per square mile." Draft EIS at 19 and 20. Whether these estimates are accurate or not is irrelevant. What is relevant and what the NPS fails to discuss is whether such deer density estimates should dictate deer management in a national park. As previously stated, because parks are subject to different management standards which emphasize the protection of natural processes including succession, such deer density estimates are not relevant to a national park and should not be relied on to justify lethal deer control. Moreover, since the NPS has not proven that its objective of forest regeneration within CMP trumps its statutory obligations, the reliance on deer density estimates in this context is particularly troubling. If the NPS intends to manage the deer in CMP to achieve a certain density, it must provide a rational and legal explanation for its authority to do so.

Finally, the NPS has failed to rigorously explore a reasonable range of alternatives in the Draft EIS. First, it rejects two alternatives suggested by the Humane Society of the United States without a rational explanation. Indeed, both the research model and ecosystem management alternatives are worthy of serious consideration given NPS statutes, regulations, and policies that, in effect, create living natural laboratories within national parks for the study of natural processes contributing to natural regulation. The rejection of these alternatives because the NPS would prefer to facilitate forest regeneration is in error as neither alternative suggests that the NPS cannot take action to further its forest regeneration goals. Both of these alternatives, if implemented, would be far more consistent with NPS legal standards than Alternative C.

Second, while Alternative B is a suitable non-lethal alternative that the NPS must select in order to be in compliance with its legal mandates, another alternative similar to Alternative B should have also been seriously evaluated. This alternative would have expanded upon Alternative B by proposing the construction of more exclosures to protect forest vegetation (both habitats and single species), the expansion of immunocontraceptive use by cooperatively developing with the Maryland Department of Natural Resources a "hunt" that would allow trained hunters to dart deer within the park, and by working with the State of Maryland and local landowners to promote and simplify existing management strategies to facilitate the lethal removal of deer from non-park lands. While AWI may not fully support such an alternative, it is the type of combination alternative that should have been subject to serious evaluation in the Draft EIS. It would cost more and it could be controversial among certain interests though it, if implemented properly, is likely to achieve deer population reduction and forest regeneration, while also protecting deer within CMP as the law requires. The failure of the NPS to consider such an alternative demonstrates both a lack of creativity and a lack of desire to develop an alternative that, over time, could achieve many, if not all, of its objectives while allowing the NPS to remain in compliance with its own legal mandates.

At a minimum, if, despite the foregoing evidence documenting significant legal and scientific deficiencies in the Draft EIS, the NPS selects a lethal control option it must reject the physical capture and euthanasia of deer as this practice is extraordinarily inhumane.

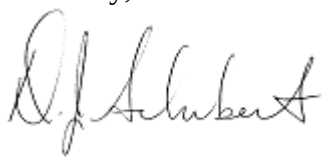
CONCLUSION:

The NPS does not have the legal authority under its own Organic Act to engage in the mass killing of deer within CMP as it has not demonstrated that deer are detrimental to public use of the park. Since statutes trump regulations, policies, objectives, and goals, it is largely irrelevant what these secondary documents allow in regard to the management of wildlife, vegetation, or other resources within a national park.

Even if this initial legal threshold were not an obstacle to the NPS proposal, the Draft EIS is deficient both due to a failure by the NPS to disclose information directly relevant to its proposal, but also because it has failed to adequately evaluate the direct, indirect, and cumulative impacts of the action on the environment.

Thank you in advance for considering these comments.

Sincerely,



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