

**Petition to Halt the Killing of Deer in
Rock Creek Park, Washington, DC
August 5, 2013**

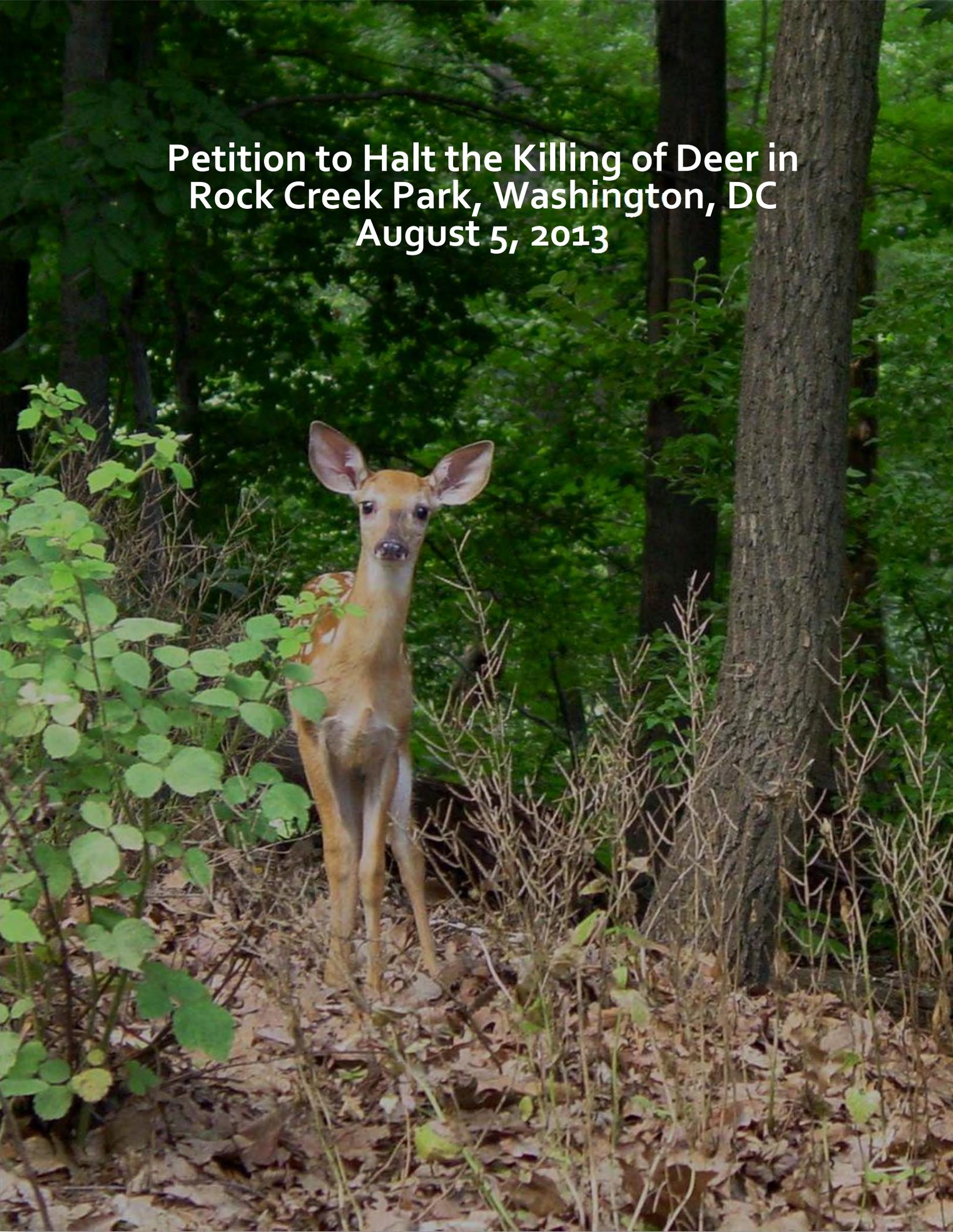


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EXECUTIVE SUMMARY

At the end of March 2013, sharpshooters killed twenty white-tailed deer in Rock Creek Park in the first phase of a multi-year program to reduce the deer population. This was the first time in the 120-year history of this national park that any native wildlife has ever been allowed to be killed. The National Park Service's decision to authorize the killing was met with community protests and a flurry of online activism, culminating in almost 11,000 signatures from Park visitors imploring the Service to use more humane ways to reduce the deer population.

This Petition presents new information not available when the Service made its decision, which involves baiting the deer with food and then shooting them with guns or arrows, every night for several months each year. The highlights include:

- A new analysis of the Park Service's own data by Dr. Oswald Schmitz, Director of Yale University's Institute for Biospheric Studies, demonstrating that deer are *not* preventing the Rock Creek Park forest from regenerating.
- Evidence that the much more serious threat to the Park's native vegetation is the increase in invasive exotic plants that need to be removed, and that so little native vegetation remains that deer are forced to leave the Park in search of food, resulting in car collisions and damage to neighboring landscaping.
- Overwhelming public concern that killing the deer with guns and archery will change the character of this very special national park in the midst of our nation's Capital "*from a haven of peace and tranquility to just one more place of violence.*"
- Increased use of nonlethal fertility control in other parts of the country.

In light of the new information, Petitioners request the National Park Service to halt any further plans to kill deer in Rock Creek Park, particularly when the deer population is relatively stable and the Service has already been required to initiate drastic cut backs on Park services under the sequester.

Meyer Glitzenstein & Crystal
1601 Connecticut Avenue, N.W.
Suite 700
Washington, D.C. 20009-1056

Katherine A. Meyer
Eric R. Glitzenstein
Howard M. Crystal
William S. Eubanks II
Jessica Almy

Telephone (202) 588 5206
Fax (202) 588 5049
meyerglitz@meyerglitz.com

August 5, 2013

Delivered By Hand and Electronic Mail

Sally Jewell, Secretary
United States Department of the Interior
1849 C Street, N.W.
Washington, D.C. 20240

Jonathan B. Jarvis, Director
National Park Service
1849 C Street, N.W.
Washington, D.C. 20240

Tara D. Morrison, Superintendent
Rock Creek Park
3545 Williamsburg Lane, N.W.
Washington, D.C. 20008-1207

**Re: Petition To Halt Killing Of Rock Creek Park Deer
Pending Consideration Of New Information**

Dear Secretary Jewell, Director Jarvis, and Superintendent Morrison:

This petition is submitted on behalf of In Defense of Animals, the Washington Humane Society, and Carol Grunewald, Jeremy Rifkin, Anne Barton, Mary Rowse, and Zhong-Ying Chen all residents of our nation's capital (hereinafter collectively referred to as "Petitioners"). In Defense of Animals is a national animal protection group with hundreds of members who live in and around D.C., and the Washington Humane Society provides animal control services for injured animals in the District, including any deer that may flee the Park after being shot as part of the current deer management program. Petitioners request that the National Park Service



(“NPS” or “Service”) and Rock Creek Park halt all further killing of white-tailed deer in Rock Creek Park in Washington, D.C. until the Park Service has considered several important aspects of this issue that the agency has not yet taken into consideration. These include: (1) a recent analysis by Dr. Oswald Schmitz of Yale University of the scientific studies relied on by the Service as a basis for reducing the deer population; (2) the need to deal with the critical exotic invasive plant species in the Park; (3) the negative impact killing this native wildlife has on visitor use of this Park; and (4) new information about the effectiveness of fertility control as a more humane and effective means of controlling urban deer populations.

We are hopeful that the Park Service will consider these proposals in light of the fact that, as recently reported by the Washington Post, 65% of the public is against the killing of deer in Rock Creek Park,¹ and almost 11,000 individuals have now signed a petition urging the Park Service to refrain from killing any more deer in this very special national park. *See* Exhibit A. Continuing to kill this wildlife against the majority of public opinion when there are far less drastic ways to protect the native vegetation in Rock Creek Park is particularly inappropriate when the federal government is operating under sequestration, which requires a freeze on hiring and cutbacks in funding for much more important programs, including those needed to protect highly endangered species. *See, e.g.,* Statement of Jonathan B. Jarvis Before The House Committee on Oversight and Government Reform Concerning Federal Agency Sequestration Planning and Implementation (April 16, 2013), Exhibit B (explaining that the Park Service had to impose a hiring freeze on all permanent positions, place Park Police under furlough, delay road openings, reduce hours of operation for programs and services, and “reduce park capacity to collect water quality data, monitor the condition of federally listed threatened and endangered species, perform compliance consultations, manage mineral extraction, and monitor mine drainage, and combat invasive plant and animals.”). Indeed, we question whether spending hundreds of thousands of dollars to kill this native wildlife is the best use of taxpayer money

¹ *See* http://www.washingtonpost.com/local/sharps shooting-plan-for-rock-creek-park-spurs-more-protests/2013/03/29/9bc1b386-981e-11e2-814b-063623d80a60_story.html

during these times of fiscal austerity.²

As set forth below, particularly because there is no urgent deer problem, we urge the Park Service to take a more measured approach to deciding the best way to protect the native vegetation in Rock Creek Park.

I. Because The Deer Population Has Remained Relatively Stable Over The Last Decade, There Is Time To Consider New Information Before Killing Any More Deer.

Petitioners are particularly hopeful that the Park Service will take these concerns into consideration in view of the fact that, even if the Park Service believes that reducing the deer population is necessary for the long-term protection of Rock Creek Park, no emergency circumstances exist that would require the agency to take immediate measures to remove deer by engaging in sharpshooting activities again this fall.³

The agency's own data, included as Table 2 in the EIS, demonstrate that the deer in Rock Creek Park have maintained a relatively stable population over the past ten years. EIS at 16.⁴

² According to the Final Environmental Impact Statement ("EIS") for the deer management program, the Park Service plans on spending at least \$232,000 for the first three years of the lethal control program, which includes \$53,200 for sharpshooting, \$15,000 for "capture and euthanasia," \$140,400 for Park Police staffing and park closure, \$7,800 for three years of park staff support for park closures, and \$15,600 (\$5,200 x 3) for "deer population monitoring." See Final Environmental Impact Statement (December 2011), Exhibit C, at 70.

³ During March 27-28, the Park Service killed approximately twenty deer under its new deer management program.
<http://www.nps.gov/rocr/parknews/rock-creek-park-completes-winterspring-2013-deer-mgmt.htm>.

⁴ Petitioners have included excerpts of the EIS, Exhibit C, and other voluminous Park Service documents cited throughout this Petition in an effort to limit the amount of material submitted here; however, the entirety of each such document is hereby incorporated by reference.

TABLE 2. DISTANCE SAMPLING RESULTS IN ROCK CREEK PARK

Year	Deer per Square Mile (density)	Standard Error of the Mean (±)
2000	62	11.6
2001	63	6.9
2002	60	8.0
2003	98	17.3
2004	75	7.8
2005	52	6.9
2006	58	8.9
2007	82	10.21
2008	66	10.05
2009	67	8.91

Source: K. Ferebee pers comm. 2007b, 2008f, 2010a

The data show that the deer densities in Rock Creek Park from 2000 to 2009 ranged from 52 to 98 deer per square mile, with four of the five most recent years showing densities of fewer than 70 deer per square mile, with no discernible trend indicating that deer numbers are increasing in the Park. In fact, according to the Park Service’s Table, densities for 2008 and 2009 were *less* than in 2007, 2004, and 2003; *see also* EIS at 18 (noting that “*the browse line is not prominent* in Rock Creek Park”) (emphasis added). In contrast, in other locations in the country where the Park Service has adopted management plans that involve killing deer, densities have been much higher. *See, e.g.*, EIS at 21 (“At Valley Forge [National Historic Park in Pennsylvania], white-tailed deer monitoring between 1983 and 2009 indicated an increase in deer density from 31-35 deer per square mile to 241 deer per square mile within the park”); *id.* at 22 (noting that the deer density in Catoctin Mountain Park has reached 125 deer per square mile); *see also* NPS, Final Internal Scoping Report for Deer Mgmt. in Rock Creek Park at 21 (Nov. 28, 2005) (Exhibit D) (explaining that it has been established that deer densities of *100 deer per square mile* “can have negative effects on plant and animal species” (emphasis added)).

Accordingly, in light of the present situation in Rock Creek Park, the Park Service has sufficient time to consider all of the issues addressed below before deciding whether to renew the killing of any more deer in the Park.

II. A New Analysis Of The Scientific Studies Relied On By The Park Service Demonstrates That The Studies Do Not Support The Conclusion That Deer Are Interfering With Forest Regeneration In Rock Creek Park.

The Park Service based its decision to remove deer from the Park on two specific scientific studies. The first reported the results of 27 long-term unfenced monitoring plots placed in three geographic regions, J. Hatfield and C. Krafft, “Analysis of Vegetation Changes in Rock Creek Park, 1991-2007” (“2009 Hatfield”). The second reported comparisons between 20 paired vegetation plots (half fenced, half unfenced). C. Krafft and J. Hatfield, “Impacts of Deer Herbivory on Vegetation in Rock Creek Park, 2001-2009 ” (“2011 Krafft and Hatfield”), Exhibit E. *See* EIS at 17. However, according to a recent analysis by Dr. Oswald Schmitz, a forest ecologist and the Director of Yale University’s Institute for Biospheric Studies, neither of these studies demonstrates that deer are impairing forest regeneration in Rock Creek Park. *See* Declaration and Curriculum Vitae of Dr. Schmitz (Exhibit F).

As set forth in his Declaration, Dr. Schmitz’s research concentrates on the link between biodiversity and ecosystem services he conducts field research specifically “to study how predator and herbivore species determine the species composition and productivity of plants in ecosystems and ensuing ecosystem processes,” and has specific expertise “on the role of white-tailed deer in ecosystems.” Schmitz Dec. ¶¶ 4-5. He is the author of several books, including *Ecology and Ecosystem Conservation* and *Resolving Ecosystem Complexity*, and has published extensively in peer-reviewed science journals, including on the subject of examining various aspects of the role of white-tailed deer in biological communities and their effects on vegetation. *Id.* Dr. Schmitz has also co-authored a chapter in the book *The Science of Overabundance: Deer Ecology and Population Management*, published by Smithsonian Press, entitled “*Rethinking the role of deer in forest ecosystem dynamics.*” Schmitz Dec. ¶ 5. Dr. Schmitz has also served as a member of the U.S. Environmental Protection Agency Scientific Advisory Board ad hoc panel

reviewing the EPA Report on the Environment, and as a reviewer for the National Science Foundation on the Ecology, Population Biology, and Physiology and Behavior panels. Schmitz Dec. ¶ 6.

As explained in his Declaration, based on his extensive experience and expertise, including a thorough review of the two studies relied on by the Park Service, Dr. Schmitz has concluded that “there is *no evidence presented that deer are impairing the forest regeneration in Rock Creek Park or that deer are facilitating the rise of invasive non-native vegetation*” the two principal reasons cited by the Park Service as a basis for deciding to remove deer from the Park through lethal means. Schmitz Dec. ¶ 9 (emphasis added).⁵

A. The 2009 Hatfield Study

As to the 2009 Hatfield Study, Dr. Schmitz explains that although the study “considered deer browse of twigs, canopy cover species, richness of herbaceous plants, and various aspects of tree seedling abundance, it *was not designed in a way that could discern how different deer abundances across the Park influence vegetation.*” Schmitz Dec. ¶ 10 (emphasis added). In fact, as noted by Dr. Schmitz, although the authors of the study “speculated that deer may have played a role in the vegetation changes,” they themselves readily admitted that “[i]t is not possible to discern the causes from these data for the significant differences found among some of these vegetation variables,” and that “*other causative factors are also possible.*” *Id.* (emphasis added); see also 2009 Hatfield at 6.

Accordingly, as Dr. Schmitz explains, “*although the 2009 Hatfield study demonstrated changes in vegetation in Rock Creek Park over time, it did not show that deer had any negative effect on plant abundance or diversity or on forest regeneration.*” Schmitz Dec. ¶ 10 (emphasis added).

⁵ Dr. Schmitz did not receive any compensation for his work on this matter. See Schmitz Dec. ¶ 8.

B. The 2011 Krafft & Hatfield Study

1. The Study Does Not Show That Deer Are Impairing Forest Regeneration.

Dr. Schmitz further explains that the 2011 Krafft & Hatfield study’s comparison of fenced areas to unfenced areas “is both well designed and rigorous, and “effectively measures whether deer are having an effect on some kinds of vegetation (but notably, not tree seedling density), and if so, how much.” Schmitz Dec. ¶ 11.⁶ However, while the data collected in the 2011 Krafft & Hatfield study were designed to observe such an effect, the data ***do not support a finding that the deer are impairing forest regeneration.*** Significantly, Dr. Schmitz explains that “the National Park Service’s reliance on this study to conclude in its EIS that the ‘[r]esults of vegetation monitoring in recent years have documented adverse effects of the large herd size on forest regeneration,’ EIS at i, is patently overstated.” *Id.* (emphasis added). In fact, as Dr. Schmitz explains, “[t]he study shows the opposite: that deer eat tree seedlings in the Park, but that this particular reduction in the number of tree seedlings has no measurable effect on forest regeneration.” *Id.* (emphasis added). Thus, as he explains, “[t]o the extent that the National Park Service adopted its deer management program based on a belief that deer are adversely affecting ‘the ability of the forest to regenerate in Rock Creek Park,’ EIS at 1, *the decision relies on a faulty premise.*” Schmitz Dec. ¶ 12 (emphasis added).

On the contrary, the data presented in the 2011 Krafft & Hatfield study demonstrate that deer browsing *is not interfering with the ability of the forest in Rock Creek Park to regenerate.* Referring to Figure 3 of the study, Dr. Schmitz explains that:

The researchers depict measurements of horizontal cover—that is, the thickness of the vegetation at a given height. Where the management goal is forest regeneration, horizontal cover at a foot or less provides useful background information, but does not indicate whether the environmental factor being measured is impairing the forest’s ability to regenerate. *What matters is the amount of horizontal cover at greater heights.* The reason for this is that *forests are self-thinning, regardless of the presence of deer.* By way of illustration, if there were 1,000 seedlings within a fenced plot, over time,

⁶ As noted by Dr. Schmitz, the authors of this study themselves acknowledge that this study does not measure tree seedling densities. Schmitz Dec. ¶ 11, *citing* 2011 Krafft & Hatfield at 12.

the seedlings would compete for sunlight and other resources, most would die, and in the end, the plot may produce only 20 trees. However, in an unfenced plot that also begins with 1,000 seedlings, the seedlings will also compete for sunlight and other resources, and in addition, deer will eat some. *If the unfenced plot also produces 20 trees, then the deer will not have affected the ability of the forest to regenerate, even if they have eaten a portion of the seedlings.*

Schmitz Dec. ¶ 12.

2011 Krafft & Hatfield Study Figure 3

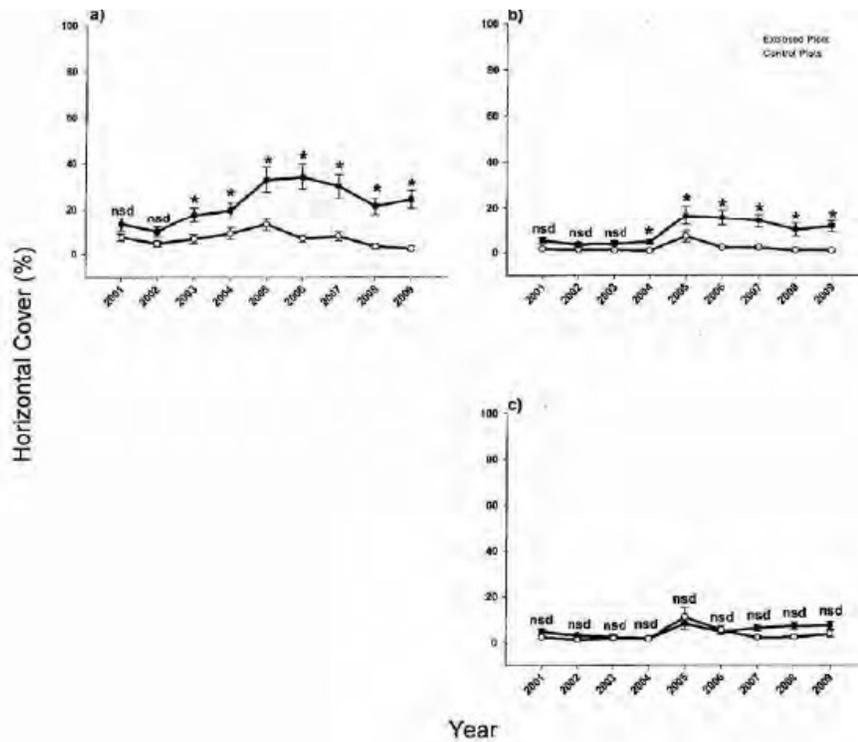


Figure 3. Vegetation thickness (cover projected horizontally) in a) Low (0-30cm), b) Middle (30-110cm), and c) High (110-190cm) height classes in the herbivory study plots at Rock Creek Park. Data points represent arithmetic means \pm 1 SE. An * indicates significant difference between excluded and paired control plots within that year. No significant difference between excluded and control plots within a year is denoted by nsd. See the text for more details on the analysis.

Dr. Schmitz further explains that these data:

show that at a low height (0-30 centimeters, or approximately 0-1 feet), the horizontal cover is significantly higher in the fenced plots than in the unfenced plots in Rock Creek Park. The difference persists, albeit less dramatically, at a medium height (30-110 centimeters, or approximately 1-3 feet). However, at waist height and above (110-190 centimeters, or approximately 3-6 feet) — in other words, the height that matters for forest regeneration — *there is no difference in the horizontal cover between the fenced and unfenced plots.*

Schmitz Dec. ¶ 13 (emphasis added). Accordingly, “[t]hese data . . . graphically demonstrate that deer in Rock Creek Park are having no net effect on forest regeneration: the horizontal cover at 3-6 feet is not affected by the presence of deer, even though they appear to eat the seedlings at lower heights.” *Id.* (emphasis added).

Therefore, the Park Service has conflated a correlation between increased densities of white-tailed deer and degraded environmental conditions with the conclusion that deer are the *cause* of these degraded conditions. As demonstrated by one of Dr. Schmitz’s publications, the Park Service is hardly the first entity to draw such a conclusion

Calls to manage the overabundance problem stem from observations that where deer are highly abundant there are also high incidences of several environmental impacts such as forest regeneration failure, loss of biodiversity, invasion by exotic species, Lyme disease risk, and deer vehicle collisions (DeCalesta 1994, McShea and Rappole 2000, Levy 2006, Kilpatrick and LaBonte 2007).

See A. Rutherford and O. Schmitz, “Regional Scale Assessment of Deer Impacts on Vegetation Within Western Connecticut, USA,” 74 *J. of Wildlife Mgmt.* 1257, 1257 (2010) (“2010 Rutherford & Schmitz”), Exhibit G (“High densities of white-tailed deer (*Odocoileus virginianus*) are believed to cause broad-scale forest regeneration failure [but] *the empirical basis for such presumptions is lacking.*”) (emphasis added). However, the Park Service now has park-specific data in hand — i.e. the 2011 Krafft & Hatfield Study — that *disprove* that deer are in fact the cause of diminished forest regeneration in the Park.

Dr. Schmitz further explains that rather than focus on the fact that “forest regeneration is *not* being limited by deer browsing,” which is “the primary result” of the 2011 Krafft & Hatfield study, the authors “instead selectively used other data from the study to reach certain conclusions

about the relationship between deer and vegetation in the Park.” Schmitz Dec. ¶ 14 (emphasis added). Thus, he notes that the authors state in the study’s abstract that “[p]rotection from deer herbivory has led to higher overall species richness and higher species richness for woody species [which are comprised of an unspecified mix of trees, shrubs, and woody vines], natives, and shrubs compared to plots not receiving protection,” and “[t]here is also evidence that plots protected from deer herbivory and those not receiving this protection are diverging over time with respect to number of variables such as cover by woody and shrub species, cover in the lowest height class, and species richness of woody and native species.” Schmitz Dec. ¶ 14. He further notes that the Park Service repeats this particular language “to reach the conclusion that the data demonstrate that ‘vegetation plots protected from deer herbivory for 9 years showed significantly greater vegetation cover compared to plots not protected from deer herbivory.’” *Id.* (citing EIS at 17). However, Dr. Schmitz explains, “in making this statement, the National Park Service misstates the limitation on the results i.e., that any biologically meaningful effects were essentially *limited to woody species and shrubs*, and that deer had no significant impact on the ability of the forest to regenerate by stating that ‘[t]his effect was *most pronounced for woody and shrub cover*,’ implying that deer were having biologically significant impacts on other vegetation as well, which is *demonstrably not true*.” *Id.* (first emphasis in original) (second emphasis added).

Again, as Dr. Schmitz explains, “[f]or the vast majority of vegetation types, the paired plots showed that *deer had no effect, or an effect so small as to be biologically meaningless*.” Schmitz Dec. ¶ 15. Despite the fact that the authors and Park Service rely on the differences where they exist, they “*ignore the fact that the study showed that deer have little to no effect on most of the vegetation in Rock Creek Park, and cannot be said to be impairing the ability of the forest to regenerate*.” *Id.* (emphasis added).

Dr. Schmitz further explains:

[W]here effects *were* observed, the 2011 Krafft & Hatfield study fails to explain why the particular resource measured is important to the management of the park or ecosystem health. For example, researchers observed statistically significant differences in the cover and diversity of woody species between the fenced and unfenced plots, but fail to explain the significance of their finds to the health, diversity, or management of the Park. Beech trees and various shrubs are woody

species and in fact, the 2011 Krafft & Hatfield study states that beech (*F. grandfolia*) was the only tree species that provided sufficient cover to meet the “dominant species” threshold but an abundance of beech trees or shrubs may not be beneficial to a forest community historically comprised of oaks or maples, particularly if beech tree or shrub seedlings outcompete the oak or maple seedlings.

Schmitz Dec. ¶ 18.

Dr. Schmitz further stresses that:

[s]imilarly, the study does not indicate whether the species abundance observed in the fenced plots is sufficient to meet the Park’s management goals or ensure the health of the biological community. For example, while the difference between species abundance of woody species in the paired plots is statistically significant, the actual numerical difference e.g., four species of woody vegetation observed in unfenced plots versus seven species observed in fenced plots in one year may be too small to make a biologically significant difference in how the forest functions. *Statistical differences are practically meaningless if they do not achieve a management goal or serve an ecological function.*

Schmitz Dec. ¶ 19 (emphasis added).

Thus, as Dr. Schmitz explains, “significantly, the 2011 Krafft & Hatfield study provides no evidence that the Park *would function differently if deer populations are reduced*, or that the minute changes that have been observed between fenced and unfenced plots would in any way diminish the value of wildlife habitat.” *Id.* (emphasis in original). Dr. Schmitz’s own research in Connecticut observed a similar result. That study measured “the relationship between deer abundance and impact across western Connecticut ” and found that deer density was not a leading factor in the loss of plant diversity or regeneration. 2010 Rutherford & Schmitz at 1260-61. The authors hypothesized that one reason deer may not have been having significant impacts is because most plants in that area are not palatable to deer. *Id.* at 1261.

As to the 2011 Krafft & Hatfield study, Dr. Schmitz’s analysis emphasizes that a lack of data demonstrating that Rock Creek Park would function differently if deer numbers are reduced is “extremely salient . . . because the National Park Service relies heavily on this study to justify its decision to *undertake a dramatic management action* i.e., to kill large numbers of native deer in Rock Creek Park and to reject non-lethal management approaches, such as fertility

control, that would reduce the deer population more gradually.” Schmitz Dec. ¶ 19 (emphasis added).

Dr. Schmitz explains that “[t]he study *does not show that deer are having any impact on upland deciduous forests or riparian deciduous forests, or that their presence is affecting rare plant communities, or that deer are disturbing deciduous forests on slopes.*” *Id.*; see also General Management Plan (2005) (“GMP”), Volume I at 200-01, Exhibit H (citing the factors for determining when an activity in the Park is considered to be negatively impacting the deciduous forests of Rock Creek Park). Nor, as Dr. Schmitz explains, “do any of the data demonstrate that deer are converting upland or riparian areas to or from vegetation types dominated by invasive or non-native species.” Schmitz Dec. ¶ at 20; GMP, Vol. I at 200-01.

2. The Study Shows That Deer Are Not Responsible For The Rise In Invasive Plant Species And That Accordingly, Removing Deer From the Park Will Not Ameliorate The Invasive Species Problem.

One of the additional stated objectives for the Service’s decision to kill deer in Rock Creek Park is to “reduce the spread of nonnative plant species through effective deer management.” EIS at I. As the Park Service knows, the presence of exotic invasive plant species in this Park is a serious problem. Indeed, according to the agency’s own 2000 Resource Management Report on the “Invasive Non-Native Plant Mitigation Program,” invasive non-native plants are “*the most serious threat to this natural area,*” and accordingly “*the top management priority designated in the Resource Management Plan goals.*” Resource Management Final Report (2000) at 5 (Exhibit I); see also Draft Exotic Management Plan (2004), Exhibit J, at 1 (acknowledging that “exotic infestations” had reached “*critical levels*”) (emphasis added); *id.* at 21 (“[f]orest fragmentation and the loss of interior habitat negatively impacts breeding neotropical migratory birds . . . and some mammals, as well as some plant species,” and that “a number of the exotic species present in ROCR [Rock Creek Park] can disperse into forest interiors, *inhibit regeneration in canopy openings and even threaten mature trees.*” (emphasis added)).

However, as Dr. Schmitz explains, the 2011 Krafft & Hatfield study “provide[s] compelling evidence that the Park Service’s deer management program *will not affect the rise of invasive, non-native species in the Park.*” Schmitz Dec. ¶ 21 (emphasis added). Thus, he states “[i]f the National Park Service were correct that deer herbivory causes exotic species to flourish by eliminating native plants that compete with these species, or if deer are responsible for bringing the seeds of non-native ornamental plantings from neighboring properties into the Park, *the data should show that fencing deer out of plots would result in less cover by non-native plants, and fewer exotic species.*” *Id.* (emphasis added). However, he notes that “[t]his effect . . . *is demonstrably absent from the data collected from the paired plots in the 2011 Krafft & Hatfield study, and hence, nothing in this study shows that deer browsing facilitates the rise of invasive plants in the Park.*” *Id.* (emphasis added).

To demonstrate this point, referring to Figure 2(d) of the study, replicated below, Dr. Schmitz further explains that:

Figure 2(d) depicts the cover of non-native species in fenced plots and unfenced plots, showing no significant difference for the first seven years of the nine-year study, and a statistically significant, but vanishingly small, difference for the last two years. The importance of this figure is not that non-native species grow slightly better in plots protected from deer herbivory although the data undoubtedly show this effect in the last two years of the study but that *non-native species grow regardless of whether deer are present. In other words, whether deer are present or not, these non-native species will continue to flourish in this Park unless they are managed by some other means.*

Schmitz Dec. ¶ 22 (emphasis added).

2011 Krafft & Hatfield Study Figure 2(a)-(d)⁷

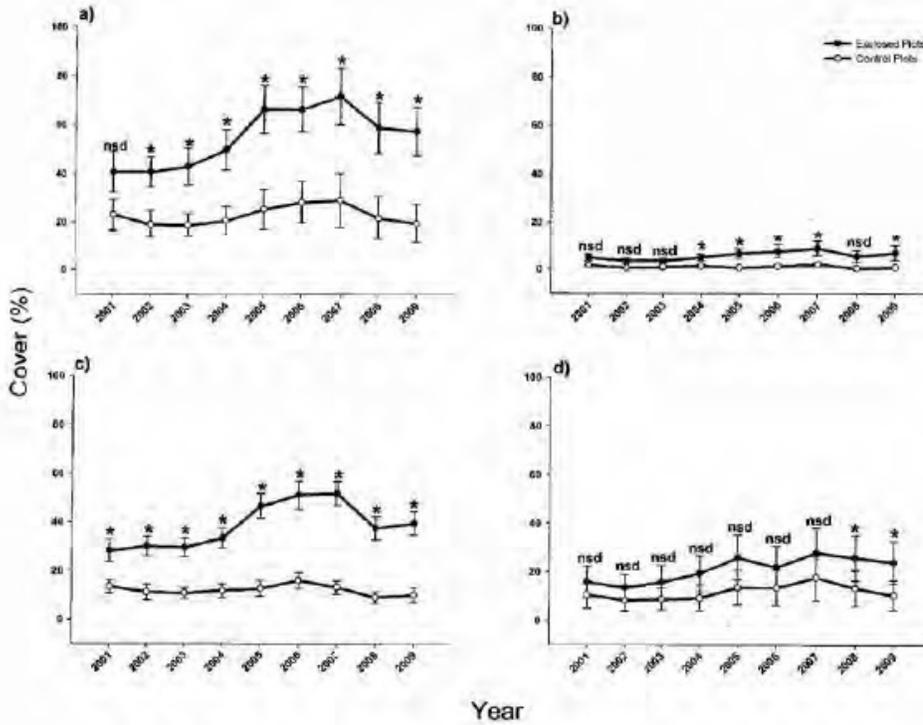


Figure 2. Cover by a) woody species, b) herbaceous species, c) native species, d) non-native species, e) trees, f) shrubs, g) woody vines, h) *F.grandifolia*, i) *V.acerifolium*, j) *L.benzoin*, and k) *H.helix* in the herbivory study plots at Rock Creek Park. Data points represent arithmetic means \pm 1 SE. An * indicates significant difference between excluded and paired control plots within that year. No significant difference between excluded and control plots within a year is denoted by nsd. See the text for more details on the analysis.

Referring to Figure 4(e) of the study, replicated below, Dr. Schmitz further explains that:

Additionally, Figure 4(e) depicts the numbers of non-native species present in fenced and unfenced plots. *These data also show no significant difference between the species richness of exotic species between the areas that allowed deer access and those that did not.*

Schmitz Dec. ¶ 22 (emphasis added).

⁷ Figures 2(e)-(k) are not reproduced here.

2011 Krafft & Hatfield Study Figure 4(a)-(d)⁸

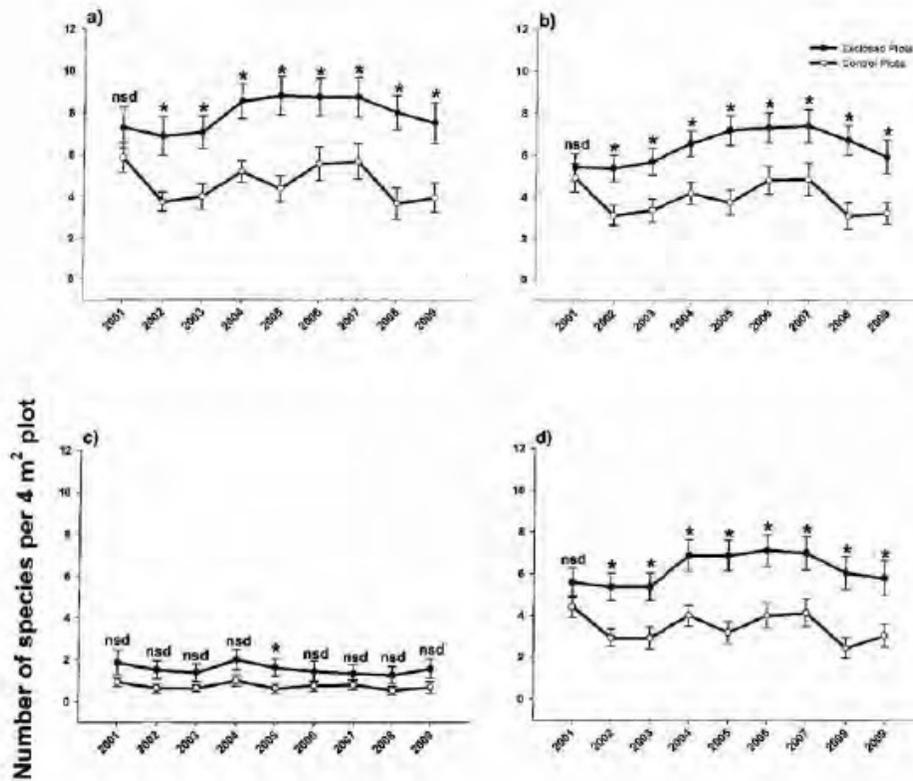
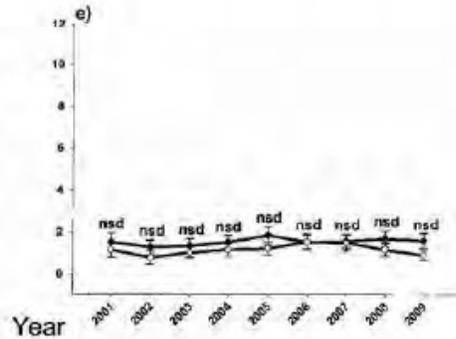


Figure 4. Species richness a) overall, b) for woody species, c) herbaceous species, d) native species, e) non-native species, f) trees, g) shrubs, and h) woody vines in the herbivory study plots at Rock Creek Park. Data points represent arithmetic means \pm 1 SE. An * indicates significant difference between excluded and paired control plots within that year. No significant difference between excluded and control plots within a year is denoted by nsd. See the text for more details on the analysis.



Thus, Dr. Schmitz states, “[i]n other words, regardless of whether the National Park Service fences deer out, eliminates them altogether, reduces their numbers, or allows the

⁸ Figures 4(f)-(h) are not reproduced here.

population to remain stable, *the data suggest that there will also be no difference in the numbers of species of exotic plants present in the Park.*” Schmitz Dec. ¶ 22 (emphasis added).

Dr. Schmitz further states that in light of *this* finding, and the EIS’s statements that “[i]nvasive non-native plants (exotic species) seriously threaten the integrity of native habitats, including eastern deciduous forests,’ and that the ‘exotic species problem is particularly acute in urban parklands where extensive edges and frequent human disturbances enhance opportunities for aggressive exotic plants to become established, such as at Rock Creek Park,’ EIS at 104, the National Park Service *should have honed in on the finding of the 2011 Krafft & Hatfield study that reducing deer numbers will not affect the rise of invasive, non-native species in the Park before relying on this study to justify its decision to kill the native deer.*” Schmitz Dec. ¶ 24 (emphasis added). As he further explains, “[a]t the very least, the 2011 Krafft & Hatfield study suggests that the relationship between the presence of deer and the rise of exotic plant species is not cause-and-effect. In other words, *reducing deer numbers will not directly reduce exotic plants in the Park.*” *Id.* (emphasis added).

Accordingly, Dr. Schmitz states that, in his professional opinion, “the 2011 Krafft & Hatfield study, in combination with the information presented in the EIS . . . demonstrate that the National Park Service’s decision to manage deer by dramatically reducing their populations is *likely to have no effect on the abundance or diversity of exotic species within the Park.*” Schmitz Dec. ¶ 25 (emphasis added).

On the other hand, Dr. Schmitz also notes that “the National Park Service’s failure to take remedial measures to prevent the increase in exotic plant species in the Park that are not palatable to deer – such as American bittersweet and Japanese barberry – but are displacing the native species that the deer prefer, *may be causing deer to leave the Park in search of food*, particularly where neighboring properties provide access to ornamental plants known to be extremely palatable to deer, such as Japanese maples, English ivy, and burning bush (sometimes called “deer candy”).” Schmitz Dec. ¶ 26 (emphasis added); *see also* 2010 Rutherford & Schmitz at 1258 (“Deer impacts vary with plant species composition and palatability”); P. Hurley et al., “Untangling the Landscape of Deer Overabundance: Reserve Size Versus Landscape Context in the Agricultural Midwest,” 146 *Biological Conserv.* 62 (2012) (“2012 Hurley et al.”), Exhibit

K (“Native herb cover will be directly affected by the rate and timing of herbivory, which in turn will be a function of deer abundance and herbivore foraging behavior.”). Therefore, he states “until the National Park Service studies these interrelated issues *the extent to which exotic plants are affecting native vegetation and deer*, and conversely, the impact of deer on exotic and native plants *it will have no defensible scientific basis for continuing to kill deer in order to preserve the native vegetation of the Park.*” Schmitz Dec. ¶ 26 (emphasis added).⁹

3. Dr. Schmitz’s Conclusions And The Need For Supplemental NEPA Review

Dr. Schmitz concludes that “the 2009 Hatfield and the 2011 Krafft & Hatfield studies *do not provide any evidence that deer are having an effect on forest regeneration in Rock Creek Park,*” and that, “[o]n the contrary, *deer are having no effect on most plants within Rock Creek Park, including exotic species.*” Schmitz Dec. ¶ 27 (emphasis added). Dr. Schmitz also explains that it is not appropriate to extrapolate data from other parks such as Catoctin Mountain Park and Gettysburg National Park “to justify [the agency’s] decision to kill deer at Rock Creek Park,” when “there simply are too many variables in any of those parks to make such reliance scientifically valid,” and, even more important, “the site-specific data here” i.e. 2011 Krafft & Hatfield “show that *deer are not damaging the plant resources of Rock Creek Park.*” Schmitz Dec. ¶ 28 (emphasis added).

⁹ Dr. Schmitz further notes that he “concur[s] with other scientists that the complex interactions among deer, other wildlife, native plants, and exotic plants should be studied in the context of the surrounding landscape, as described in S.L. Stout, *Assessing the Adequacy of Tree Regeneration on the Cuyahoga Valley National Recreation Area: A Literature Review and Recommendations* (1998),” Exhibit L, and that Geographic Information System (“GIS”) technology should be employed, together with sampling, to determine concentrations of Japanese barberry and other exotic plants,” because such “information may shed light on whether exotic plants are being cultivated by homeowners in the neighborhoods surrounding the Park, and if so, whether the wind or birds are carrying the seeds onto Park lands.” *Id.* As the literature demonstrates, all too often “natural areas . . . resemble islands in hostile seas, too small to sustain important ecological processes (e.g., organism movements, natural disturbances) and surrounded by incompatible land uses.” 2012 Hurley et al. at 62. Considering natural areas of conservation interest in the context of surrounding land uses will sometimes result in conservation strategies that include discontinuing practices in nearby areas that have “hostile” ecological results.

In view of this new scientific information which goes to the heart of the agency's premise for killing wildlife in Rock Creek Park for the first time since the Park was established in 1890 and especially when, in the words of the Park Service itself, the Enabling Act for this Park requires the Park Service to preserve the native wildlife within the Park "in as natural condition as possible," EIS at 11 (citing Enabling Legislation), at an absolute minimum, the Park Service should conduct a supplemental environmental review of its decision to remove deer by lethal means before renewing such activities in the future. *See* 40 C.F.R. § 1502.9(c) (providing that agencies "shall" prepare a supplemental EIS where "[t]here are *significant new* circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." (emphasis added)); *see also Marsh v. Or. Natural Res. Defense Council*, 490 U.S. 360, 374 (1989) (explaining that NEPA "require[s] that agencies take a 'hard look' at the environmental effects of their planned action, even after a proposal has received initial approval"). Therefore, because the deer management program is a multi-year program, *see* EIS at 68, the Park Service should undertake such supplemental NEPA review to determine whether it really needs to continue to kill deer to preserve the native vegetation in this Park.¹⁰

III. The Park Service Should Examine The Impact Of Exotic Plants On the Perceived Deer Problem And Increase Efforts To Reduce The Exotic Invasive Species.

Petitioners are also concerned that, in deciding to kill deer in Rock Creek Park, the Park Service did not sufficiently analyze the impact of the exotic plant species problem on the deer. In light of what the Park Service has recognized is the Enabling Act's directive that the native wildlife and plant species be preserved "in as natural condition as possible," EIS at 11, the agency should consider whether its limited resources would more appropriately be used to reduce the volume and spread of invasive exotic plants in the Park rather than to kill native wildlife. In

¹⁰ Although the Park Service initially planned on contracting with sharpshooters to kill in excess of 183 deer in "year 1," EIS at 65, it apparently killed only 20 deer last spring. Therefore, there can be no question that there "remains 'major Federal actio[n]' to occur" here, and that supplemental NEPA review would be appropriate. *Marsh v. Or. Natural Res. Defense Council*, 490 U.S. at 374.

this regard, as demonstrated above, while the agency relied on the need to “reduce the spread of nonnative plant species through effective deer management” as a basis of its decision to reduce the deer population, EIS at I, Dr. Schmitz explains that the agency’s own principal study of deer herbivory demonstrates that “*non-native species grow regardless of whether deer are present.*” Schmitz Dec. ¶ 21 (emphasis added).

On the other hand, as Dr. Schmitz also explains, the presence of so many invasive exotic plants in the Park that are “displacing the native species that are the deer’s preferred vegetation, may be causing deer to leave the Park in search of food, particularly where neighboring properties provide access to ornamental plants known to be extremely palatable to deer.” Schmitz Dec. ¶ 26. Indeed, the Service itself has recognized that “[*e*]xotic plants both inside and outside the park have reduced deer forage.” EIS at 257 (emphasis added).

The Park Service has long recognized that invasive non-native species are a major threat to the native vegetation in the Park, and that the greatest contributing factor to this problem is the private ornamental landscaping used by residences and offices that surround the Park. The Service’s 1996 Natural Resources Management Plan explained that Rock Creek Park is a “virtual island[] amidst the extensive residential and commercial areas of metropolitan Washington,” and that, as a result, “[t]he city’s paved, *landscaped and densely inhabited lands cause* undesirable flows of stormwater and *inevitable migrations of exotic or feral species into the park[].*” Natural Resource Management Plan (1996), Exhibit M at 6 (emphasis added).

As that document further demonstrated, “41 [exotic] species . . . are presently considered to be aggressive and *displacing or killing native plants and eliminating habitats which the park should be protecting.*” *Id.* at 18 (emphasis added). As the Park Service also acknowledged, “[t]his process, if left unattended, will result in *significant impacts on parklands including loss of native trees and plant species, fundamental alterations of park ecosystems, adverse effects on wildlife habitat and species,* and loss of desirable natural scenery both in the parks and along entrance roads to the nation’s capital.” *Id.* (emphasis added).

The 2000 Resource Management Report on the “Invasive Non-Native Plant Mitigation Program” for the Park reiterated that “invasive non-native plants (INPs) seriously threaten” the forest “*by aggressively displacing and killing native plants, reducing native habitats, and stifling*

forest regeneration.” Final Report at 4, Exhibit I (emphasis added). It further stated that invasive non-native species are “*the most serious threat to this natural area and are the top management priority designated in the Resource Management Plan goals,*” but that the agency’s “lack of understanding of how to control [invasive non-native plants] and lack of resources to do the job have *allowed the [invasive non-native plant] infestations to reach the critical levels that now exist.*” *Id.* at 4-5 (emphasis added). The Report further stated that in Rock Creek Park, “more than one-third (36%) of the 656 documented plants species . . . are exotic,” “of these 41 are aggressive invaders,” and that the “*numerous landscaped private properties*” that surround the Park are “*sources of 40 out of 41*” *invasive non-native species.* *Id.* at 4 (emphasis added).

In 2004, the Park Service issued a Draft Invasive Exotic Management Plan that repeated many of these conclusions. *See* Draft Invasive Exotic Management Plan (2004), Exhibit J. That Plan reiterated that “exotic infestations” had reached “critical levels,” that “[f]orest fragmentation and the loss of interior habitat *negatively impacts breeding neotropical migratory birds,*” and that “a number of the exotic species present in [Rock Creek Park] can disperse into forest interiors, *inhibit regeneration in canopy openings and even threaten mature trees.*” *Id.* at 21 (emphasis added). The Draft Plan again emphasized that the private landscaping that surrounds the Park is a major source of this critical problem. *See id.* at 3 (noting that the Park’s boundary “interfaces the forest with streets and other urban landscape components, especially numerous landscaped private properties,” and that “[o]f the 41 most aggressive exotics, 40 are horticultural plants”) (emphasis added); *see also id.* at 11 (“[a]djacent home and office gardens are filled with exotic plants . . . *from which seeds can disperse into the park*”) (emphasis added); *see also id.* at 29, 30, 40, 42, 47, 48, 50, 51, 52, 54, 55, 57, 61, 66, 72, 79, 80, 83, 84, 85 (identifying the injurious invasive plants that are “*widely used in landscaping*” around the Park) (emphasis added). Noting that the Enabling Legislation for the Park “mandates that [the Park] maintain its native ecosystems ‘in as natural a condition as possible’ in perpetuity for the enjoyment of future generations,” and that the Executive Order on Invasive Species, No. 13,112, 64 Fed. Reg. 6183, 6184 (Feb. 3, 1999), requires the Park Service to do something about this problem, the Plan once again stressed that “[e]xotics are identified as *the most serious threat to this natural area*” and

accordingly “are the *top management priority*” for resource management within the Park. Draft Invasive Exotic Management Plan at 3 (emphasis added).

The 2005 General Management Plan for Rock Creek Park further reported that “[t]he recent inventory of park vegetation [] determined that *238 of the plant species were introduced species, not native to the area,*” and that “[o]f this number, 42 species have been judged to be invasive exotic plants that, *unless controlled, are likely to spread and adversely affect native plant populations.*” Exhibit H at 143 (emphasis added). Thus, the Park Service again stressed that “[c]ontrol of these invasive exotic plants is a serious problem in the park,” and that “control efforts are not able to keep pace with the rate of invasive plant introduction and spread.” *Id.* (emphasis added).

Although the EIS for the deer management plan also acknowledged that exotic plants in the park “have reduced deer forage,” EIS at 257, in deciding to reduce the deer population the Park Service did not take into account that this overarching problem may be causing deer to leave the Park in search of food, which in turn increases the risk of deer-car collisions and damage to neighboring landscape. Yet, these precise concerns have clearly influenced the agency’s decision that the deer in Rock Creek Park have reached their “cultural carrying capacity” i.e., “the maximum number of deer that can coexist compatibly with local human populations” even though, as the Park Service’s own records show, the deer have not yet reached their “biological carrying capacity.” See “An Evaluation of Deer Management Options” (May 2009), Exhibit N, at 5. The EIS for the deer management plan is replete with complaints from D.C. and Maryland residents about the number of deer that are crossing roads and destroying private landscaping and vegetable gardens, *see* Scoping Comments and Comments on Draft EIS, and the Park Service cited these very concerns in discussing the impacts of the deer reduction program. EIS at 148-149.

In light of all this evidence, it seems obvious that to fulfill its statutory duty under the Enabling Act to preserve both the native wildlife *and* native vegetation in this Park “in as natural condition as possible,” EIS at 11, as well as the agency’s duties under Executive Order 13,112 “to prevent the introduction of invasive species *and provide for their control,*” 64 Fed. Reg. at 6184 (Feb. 3, 1999), the Park Service should recognize the significant impacts these non-native

species are having on deer behavior, and take aggressive measures to reduce the presence of such species *before* renewing its program to kill this native wildlife.¹¹

Here, it seems obvious that the diminishing native vegetation in the Park as a direct result of the encroachment by exotic plants is having a major impact on deer for two interrelated reasons. First, it is causing the deer to leave the Park in search of food, which, in turn, increases the risk of deer/car collisions, as well as deer damaging neighboring landscaping. Second, it has forced the deer to eat the little native vegetation that remains available in the Park thereby exaggerating the perceived “negative” impact of deer on that vegetation, which, in turn, became the basis for the Park Service’s decision to begin killing this native wildlife for the first time in over 120 years. Accordingly, pursuant to the agency’s own statutory directives and authority, as well as the requirements of NEPA, these matters should be examined and dealt with holistically before the Park Service renews any killing of this wildlife. *See, e.g.*, 40 C.F.R. § 1508.25(a) (CEQ regulation requiring agencies to consider together in the same NEPA document multiple agency actions that are “connected,” “cumulative,” or “similar”).

In addition, it seems particularly unjustified and unfair for the Park Service to be killing the native deer to, in effect, protect the very exotic landscaping that has played such a major role in contributing to the demise of the native vegetation in the Park. Simply put, if the agency could significantly reduce the invasive species in the Park as well as some of their principal *sources* the native vegetation would have an opportunity to rebound and the deer would have little need to leave the Park in search of alternative food opportunities.

In this regard, we note that, according to the agency’s own General Management Plan for the Park, in addition to its authority to engage in measures to remove non-native plant species directly from the Park, the Park Service also has authority to “be involved with actions outside the park,” including “*working with the city, other public agencies, and landowners to address park integrity concerns and deal with issues relating to the protection and enhancement of*

¹¹ In this regard, the Invasive Species Council, an entity created by Executive Order 13,112 and co-chaired by the Secretary of the Interior, issued a Management Plan directing all agencies to use the NEPA process to “identify actions that are likely to affect invasive species *or be affected by them.*” National Invasive Species Council Management Plan (2001), Exhibit O at 69 (emphasis added).

resources, even when the resources are outside the park.” General Management Plan (2005) at 28 (citing NPS Organic Act; Redwood Amendment to the General Authorities Act, and 2001 Management Policies) (emphasis added); *see also* NPS Management Policies (2006) § 1.6 (“[r]ecognizing that parks are integral parts of larger regional environments, its primary concern of protecting park resources and values, the Service will work cooperatively with others to . . . anticipate, avoid, and resolve potential conflicts; [and] protect park resources and values.”). Accordingly, Petitioners urge the agency to undertake such activities as soon as possible, and to assess their impact on reducing any perceived deer problem both within and outside the Park before renewing the killing of any more deer.¹²

IV. The Park Service Should Consider The Adverse Impact Its Lethal Approach Has On The Park’s Historic Overall Character.

Petitioners also request that the Park Service halt further killing of deer until it has considered the impact of this change on the overall character on the public’s use and enjoyment of this particular Park. As the General Management Plan for the Park explains, the agency must consider the impact its actions will have on the “*traditional park character* and visitor experience.” Management Plan at vii (emphasis added).

As reflected in the language of the Enabling Act, its legislative history, the Park Service’s administration history of the Park, and public comment on the proposed deer management plan, Rock Creek Park has traditionally been a place of quiet contemplation in the middle of our nation’s capital where no one has ever been allowed to kill, wound, or for that matter even

¹² As the attached summary of the literature shows, pesticides are just one management tool available to control invasive exotic plants. In addition to manual and mechanical removal by hand or bulldozer, there are many innovative approaches that can be used, the best of which restore balance in the biological community. *See* attached Summary, Exhibit P; *see also* M. Huston, “Management strategies for plant invasions; manipulating productivity, disturbance, and competition,” *Diversity and Distributions* (2004) 10, 167-78 (Exhibit Q); National Park Service Exotic Plant Management Teams, http://www.nature.nps.gov/biology/invasivespecies/EPMT_teams.cfm.

intentionally *bother* the native wildlife.¹³ Accordingly, the General Management Plan emphasizes that a “major effect” on this particular Park would be one that “*would substantially alter a traditional park use or the quality of the experience of most users,*” including “*the elimination of a traditional visitor experience.*” GMP at 214 (emphasis added). Here, as the comments on both the General Management Plan and the Deer Management Plan demonstrate, a “traditional park use” and “quality of experience” for users of *this* particular Park is inextricably tied to the fact that it has *never* allowed the killing of any wildlife.

Although the most recent visitor study done for this Park was conducted in 1999—long before the agency had even proposed killing native wildlife for the first time since the Park was created in 1890, *see* EIS at 412—that study showed that 68% of the people who use the Park do so to enjoy the native plants and animals, 47% come to this Park to “*escape the city environment,*” and 30% treasure the Park’s “*solitude.*” *See* Visitor Study (1999) at 65 (Exhibit R) (emphasis added). More recently, members of the public who commented on the agency’s proposal to kill deer warned that killing wildlife for the first time in the history of the Park would forever change its traditional character by “*disturb[ing] the peace,*” interfering with the “*peace and tranquility of Rock Creek Park,*” and transforming it from a “refuge for all animals” into a “killing ground.” *See* Exhibit S. As one commenter succinctly explained, shooting the deer would “*mar[] the serenity and peace that many of us associate with this national treasure.*” *Id.* (emphasis added).

Moreover, to date, almost 11,000 individuals have signed a petition in the last few months to “ask the National Park Service to refrain from killing any wild animals, including white-tailed deer, in Rock Creek National Park this year (2013) and in the future,” because “[t]he killing of wild animals has never been permitted in this jewel of the National Park system since the park’s creation in 1890,” and “[k]illing the deer, with guns and archery, will *change the character of this very special national park in the midst of our nation’s Capital from a haven of peace and tranquility to just one more place of violence.*”

¹³ For example, years ago when it was discovered that a beaver in the Tidal Basin was causing serious damage to the cherry trees, rather than kill the beaver, alternative approaches were found to protect the trees. *See* <http://www.washingtonpost.com/wp-srv/local/daily/april99/chomp7.htm>.

<http://www.change.org/petitions/national-park-service-don-t-kill-deer-in-our-nation-s-capital>
(emphasis added)

Therefore, particularly in light of the agency's overall mandate to leave all national parks "unimpaired for the enjoyment of future generations," 16 U.S.C. § 1, Petitioners urge the Park Service to suspend its lethal control program at least until it has an opportunity to study this particular impact just as it would do if it were opening this Park for the first time to public hunting or any other activity that was not in keeping with the historic use of a national park. *See, e.g.,* NPS, Second Revised Draft Hunting Management Plan (2012) at 96-100, 161-65 (reflecting that the Service conducted a visitor study in connection with its decision to authorize recreational hunting in the Addition Lands of Big Cypress National Park); *see also* 70 Fed. Reg. 61,893, 61,900 (Oct. 27, 2005) (NPS conducted a visitor use study concerning the proposal to allow jet skis in Pictured Rocks National Lakeshore); 40 C.F.R. § 1502.9 (requiring supplemental NEPA review to analyze significant new "information relevant to environmental concerns" bearing on the proposed action).

V. If Reducing The Current Deer Population Is Still Deemed Necessary, The Park Service Should Do So With Fertility Control.

Should the Park Service reject Petitioners' proposal to consider a more aggressive attack on the invasive plant species problem as an alternative way to protect the native vegetation in the Park, or for any other reason decide that it must take measures to reduce the native deer population, Petitioners urge the Park Service to do so through the use of fertility control rather than lethal means. Although Petitioners realize that the agency rejected this approach when it issued its Final EIS in December 2011, *see* EIS at 173-76, since then new information has emerged on the viability of using reproductive controls to suppress free-ranging deer populations. In fact, this new information sheds doubt on many of the conclusions that were central to NPS's rejection of a nonlethal alternative. *See id.*

First, new research published last month by a research team led by Dr. Allen Rutberg demonstrated that hand-injected reproductive controls prevented pregnancy for multiple years. *See* Allen T. Rutberg *et al.*, *Field Testing of Single-Administration Porcine Zona Pellucida*

Contraceptive Vaccines in White-Tailed Deer (Odocoileus virginianus), 40 Wildlife Res. 281 (2013) (Exhibit T). Over a five year period, Dr. Rutberg's team captured and ear-tagged 245 free-ranging female deer, applying reproductive controls, including a PZP preparation that was engineered to release hormones at 1, 3, and 12 months post-treatment. The team took blood tests to determine if the does had become pregnant during the study period, and found that the treatment successfully prevented pregnancy in 95 to 100 percent of the deer in the first year and 65 to 70 percent a year later. The study concluded that there are now "multiple options for single-treatment, multi-year immunocontraceptive vaccines" for deer and that "safety concerns" appear to be resolved.

As explained in the attached Declarations of Dr. Jay Kirkpatrick and Dr. Rutberg the nation's leading experts on the use of fertility control for wildlife, such fertility control approaches are a particularly viable approach to managing white-tailed deer when the population has been relatively stable for years the situation presented by Rock Creek Park deer. *See* Declaration of Jay Kirkpatrick, Ph.D., Exhibit U; Declaration of Allen Rutberg, Ph.D., Exhibit V. In fact, immunocontraception has been successfully used at the National Institute of Standards and Technology in Gaithersburg, Maryland, and on Fire Island, New York, despite the fact that the deer populations at these sites all have "open" characteristics. *See* Kirkpatrick Decl. ¶ 13.¹⁴

Second, another nonlethal contraceptive technique ovariectomy, which involves the permanent surgical removal of the ovaries to prevent pregnancy is now successfully being used in the state of Maryland to reduce deer numbers. "2013 Update: 3rd Phase Completed for Maryland's First Nonlethal Sterilization Project for Deer," Wild News at 2 (Spring/Summer 2013) (Exhibit W). The procedure is performed quickly in the field, with positive outcomes: this past winter, in the third phase of the program, eight of ten does remotely immobilized had already undergone the procedure suggesting not only "a significant reduction in fawns and a stabilization of the doe population without a major influx of new deer," but also positive long-

¹⁴ As Dr. Rutberg also explains, the mere fact that PZP has not yet been registered by the EPA for use in free-ranging deer does not pose a barrier to its use in Rock Creek Park, since prior to EPA registration, PZP was used to control wild horse populations at Assateague Island National Seashore, Maryland and Cape Lookout National Seashore, North Carolina. *See* Rutberg Decl. ¶ 12 (and literature cited therein).

term outcomes for the individual deer. *Id.* We understand that some communities may be using a combination of these approaches—fertility drugs plus ovariectomies—as a means of controlling deer populations, and we urge the Park Service to consider such approaches as well.¹⁵

Further, because such reproductive controls are now more viable than when the Service issued its Record of Decision in May 2012, NPS could begin implementing them under that decision. *See, e.g.*, Record of Decision (May 2012), Exhibit X, at 3 (“[i]f an acceptable reproductive control agent becomes available . . . the park could select to use that first (before initial sharpshooting), so that deer are not as hard to capture and more can be treated.” Indeed, because reproductive controls have tremendous community support and will result in “reduced impacts relating to visitors, safety, and the environment,” and because as demonstrated above, there is no urgent need to immediately reduce the deer population, the Service should shift to productive controls as soon as possible, rather than continue to kill this native wildlife.¹⁶

On the other hand, if the Park Service continues on its current path of *killing* deer each year to reduce the population, this will simply make it more difficult to shift to the much more humane and ultimately effective means of controlling the population with fertility control. As the Park Service itself has recognized, these animals—which until March of this year had been fully protected from any violence from guns—will, if lethal control escalates, seek to avoid humans, making it extremely difficult, if not impossible, to ever treat the deer with fertility control. *See* EIS at 69 (acknowledging that “getting close enough to deer to administer remote injections [of fertility drugs] would become increasingly difficult *after sharpshooting efforts*”); *see also* Minutes of Science Team (March 27, 2006), Exhibit Y (recommending that if fertility controls “are used in conjunction with a reduction method . . . *the reproductive control is*

¹⁵ *See also* <http://www.deerfriendly.com/deer-population-control> (discussing other jurisdictions using non-lethal control for deer populations).

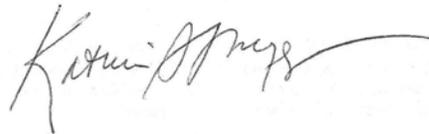
¹⁶ *See, e.g.*, EIS at 329-33 (categorizing all comments received, and showing, for example, that 53 times as many comments supported “Alternative B: Non-lethal Actions” than opposed it, and 14 times as many comments opposed “Lethal Reduction” of deer than supported it); ROD at 10 (“[i]f reproductive control is used, there could be reduced impacts relating to visitors, safety, and the environment by eliminating the need to close the park for extended periods of time and limiting the time that shooting would occur in the park.”).

initiated prior to the reduction to make it easier to capture and treat individuals”) (emphasis added).¹⁶

CONCLUSION

For all of these reasons, Petitioners respectfully request that the Park Service halt any plans to renew the lethal deer control program until the new information and suggested alternative approaches presented here are more fully examined. Petitioners remain ready and willing to assist the Park Service in pursuing any and all of the alternative approaches advanced here, to meet with the agency to discuss these issues, and to answer any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Katherine A. Meyer". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Katherine A. Meyer

A handwritten signature in black ink, appearing to read "Jessica Almy". The signature is cursive and somewhat stylized, with large loops.

Jessica Almy

Counsel for Petitioners

¹⁶ A fertility control approach is also preferable from a cost-savings perspective since the Humane Society of the United States has already offered to contribute a substantial amount of the costs of such a program. *See* HSUS Proposal (Sept. 2, 2010), Exhibit Z, (estimating the total cost of using PZP over five years as \$183,000 to be shared equally by HSUS and NPS).