



# Animal Welfare Institute

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April 24, 2009

**BY ELECTRONIC AND REGULAR MAIL**

Superintendent  
Attention: Randy Knutson, Wildlife Biologist  
Indiana Dunes National Lakeshore  
1100 North Mineral Springs Road  
Porter, IN 46304-1299

Dear Mr. Knutson:

On behalf of the Animal Welfare Institute (AWI), I submit the following comments on the Draft White-tailed Deer Management Plan/Environmental Impact Statement (DEIS) for Indiana Dunes National Lakeshore.

Given the lack of data disclosed in the DEIS, the inadequate level of analysis, and other deficiencies inherent in the document, AWI supports the selection of Alternative A or Alternative B. It objects to the selection of either Alternatives C or D as the National Park Service (NPS) has failed to provide sufficient evidence to suggest such drastic measures – measures which are antithetical to the mission and mandate of the NPS, are necessary.

AWI is concerned about a clear trend within the NPS to pursue lethal management strategies to address alleged conflicts/problem attributable to White-tailed deer. Indiana Dunes National Lakeshore (IDNL) is not the first park to suggest such draconian action but, rather, simply one in a series of parks that have decided to abandon the protectionist mission and mandate of the NPS in favor of using bullets, sharpshooters, and rifles with silencers to solve a perceived problem. The fact that the environmental documents prepared in an attempt to substantiate the need for such lethal action in, for example, Catoctin Mountain Park, Rocky Mountain National Park, Valley Forge National Park, and IDNL are identical in format and content except for the relevant park-specific information demonstrates that this decision to favor culling over conservation is a coordinated effort throughout the NPS. This effort is misplaced and violates the NPS Organic Act, its implementing regulations, and NPS policies as will be discussed in greater detail below.

Furthermore, a fundamental problem in the environmental analyses prepared for the other parks listed above was the lack of disclosure of information and a failure to properly evaluate the impacts, including cumulative impacts, of the no-action and action alternatives. The INDL, in the DEIS, has taken this deficiency to a new level in its failure to disclose an immense amount of information that would, based on statements in the DEIS be available but that the INDL apparently prefers to keep secret. The National Environmental Policy Act or NEPA, the legal basis upon which the DEIS must be constructed, however does not permit non-disclosure or inadequate analysis. Examples of these deficiencies will also be addressed below.

As was the case with the environmental analysis prepared for the Valley Forge National Historical Park deer management plan, the lengths to which the NPS has gone to vilify deer in its analyses is shocking. Despite no credible evidence that the deer population in IDNL has adversely affected public use of the park, the NPS has painted a picture of deer that would make the most ardent deer advocate, if uninformed as to the inaccuracy of the NPS description, question their affection for this species. Indeed, the NPS blames deer, largely on the basis of conjecture alone, for destroying the park's floral community, adversely affecting other faunal species, transmitting disease, ruining the experience of park visitors, jeopardizing public safety, ruining residential landscapes, and polluting the water. In its intentional efforts to create this ugly, destructive image of deer, the NPS spends virtually no ink describing the benefits of deer in any ecosystem including their aesthetic beauty, their amazing adaptability to a human-dominated and degraded landscape, their grace, their role as ecosystem engineers, and their value to those city dwellers who may never have the opportunity to see deer in their natural habitat except when visiting IDNL. Indeed, the extent to which the NPS has attempted to cast dispersions on native deer on and adjacent to the IDNL introduces a bias against deer and in favor of deer slaughter that is inherent throughout the DEIS and which, consequently, adds to the deficiencies inherent in the document.

There is little question that the DEIS is replete with deficiencies. In addition, it is premature in that the NPS needs to engage in additional studies within IDNL to obtain up-to-date information on the park's deer population, vegetation, and other wildlife species in order to prepare a meaningful analysis of the actual environmental impacts of the proposed action and other alternatives as required by NEPA. At present, though the NPS would appear to have more relevant data in its files that inexplicably it elected not to disclose in the DEIS, the DEIS is so replete of any specific relevant data on key issues like the deer population, vegetation composition and abundance data, and an assessment of the status of and threats to other wildlife, it is impossible for the public to evaluate what the environmental impacts of the action are likely to be. Conjecture, assumptions, and best guesses do not represent a sufficient standard of proof, scientifically or legally, to satisfy the requirements of NEPA.

The NPS, as reflected in this and other plans to shoot large numbers of deer within the protective confines of a national park, has lost its way. What's most troubling is that this is not the first time in the history of the NPS that the agency has elected to ignore its own Organic Act in favor of taking actions that are entirely impermissible and illegal. For decades, particularly from the 1930's to the late 1960's, the NPS was engaged in actions throughout many of the parks that were established at that time that, in effect, turned the Organic Act on its head. Fortunately, a wake up call was delivered in 1967 with the

release of the Leopold Report which forced the NPS to rediscover and reembrace its mission and mandate. Considering the current NPS efforts promoting persecution over protection, another wake up call is urgently needed.

For the reasons identified above and below, the NPS must withdraw this DEIS and, if it desires to develop a credible deer management plan, must restart its NEPA planning process and, this time, develop an EIS that is objective, discloses all relevant scientific information, and that provides an accurate and comprehensive analysis of the impacts of the proposed and alternative actions.

As a preface to comments on the DEIS, AWI again requests that the NPS reopen the comment deadline on the DEIS to provide interested stakeholders and citizens additional opportunity to carefully review the document and to prepare informed and substantive comment to aid the NPS in its decision-making process. This request is not intended to solely provide AWI or the like-minded organizations additional time to identify additional arguments to question the intent or content of the DEIS but this would benefit all parties, regardless of their position, in evaluating the DEIS and informing the NPS of their concerns. AWI and The Humane Society of the United States had previously requested a 30-day extension in the comment deadline until late May 2009. In their April letter a number of credible reasons were provided to justify this request including, but not limited, to the fact that any lethal deer control, if that was a component of the final decision, was months and more likely years away (due to the stated need to conduct two years of vegetation monitoring) and that one of the core pillars of NEPA is providing the public with a meaningful opportunity to comment on an agency's action. In response, earlier this week, IDNL submitted single paragraph reply denying the request and suggesting that a 77-day comment period was sufficient. No other justification was provided by IDNL as a basis for its denial of the request. As a result of this denial, this comment letter is not as comprehensive as it could have been and, therefore the NPS and its decision-makers will not benefit from the level of review and analysis of the DEIS that could have been provided if the comment deadline extension request was granted.

This reply fails to provide any substantive basis for why the INDL would not provide the requested extension in the comment deadline. Not only does NEPA explicitly state that public participation is "essential" to the NEPA process but that they also must "encourage and facilitate public involvement in decisions which affect the quality of the human environment." 40 CFR 1500.1(b) and 1500.2(d). Moreover, the NPS offered no compelling evidence in the DEIS or in its reply to the AWI/HSUS request letter that there is any urgency in initiating lethal deer control on IDNL. Indeed, even assuming the NPS had the data to meet the vegetative triggers for lethal deer control outlined in the DEIS, the earliest such control actions could be implemented would be in October some six months away. More likely, however, given statement contained in the DEIS (as discussed below), any lethal deer control on the IDNL is probably at least a few years away pending the initiation of vegetation sampling to determine if the above-referenced triggers have been met. In either case, the NPS has offered absolutely no defense for its unwillingness to consider a mere 30-day extension in the comment deadline. For that reason AWI again requests that the NPS, at this time and if it chooses to continue to pursue this planning process despite the significant deficiencies in its analysis, officially reopen this document for an additional thirty-days of public review.

The remainder of this comment letter will, save for an introductory section providing an alternative perspective on white-tailed deer ecology, identify specific concerns or questions relevant to the information provided in the DEIS. This analysis is as complete as possible given the time constraints under which these comments were produced due to the NPS failure to provide the requested extension in the deadline for comments and because of the author's varied other responsibilities and projects. In the event that there remain substantive issues that could not be properly disclosed or fully evaluated in this DEIS, AWI asks the IDNL to agree to consider either an amended version of this comment letter or an addendum to the letter if AWI determines that such a document is needed.

The IDNL environment is very different today than it was 100, 200, or even 300 years ago. At some time in the past there was a full complement of species, predator and prey, inhabiting the area now home to the IDNL. Large predators have been exterminated for many decades. It could be argued that the predators with large teeth of yesteryear have been replaced with the 4-wheeled predators with large engines of today. The reality, as is disclosed in the DEIS, is IDNL is an island of natural habitat surrounded by either water or an increasingly crowded residential and industrial complex. While deer are remarkably adaptable to living with and among humans and their developmental infrastructure, the declining natural habitat base is a product of human expansion and must not be used to blame deer for conflicts with humans or to justify their large-scale slaughter. If anything, the failure of humans to consider the needs of wildlife in their planning efforts indicates that humans should, in fact, be blamed for the conflicts they cause with deer.

While large predators are no longer present on IDNL, it is well established in the scientific literature the predators don't control prey populations but, rather, that prey numbers and density controls predators. Thus, the elimination of the large predators did not result in uncontrolled growth in prey numbers but, rather, increased the fluctuations in prey (i.e., deer) populations over time. The deer population on IDNL is not overabundant biologically or ecologically speaking. Instead, it may be overabundant based on a measure of human tolerance (i.e., the cultural carrying capacity). This capacity is not static but dynamic and likely is changing constantly depending on each person's personal experience with deer, their knowledge about deer and their ecology, and how they perceive deer (i.e., beautiful woodland species that provides immense pleasure when seen in the park or in their yard or landscape damaging, disease-carrying, threat to damage my automobile or injure me four-legged villain).

In this case, the cultural carrying capacity is largely based on the opinions and tolerance levels for deer among the residents of the area and of the NPS and its employees at IDNL. For the vast majority of visitors to IDNL or the Indiana Dunes State Park, deer are a valuable part of the park experience. Considering that two of the three local communities have already instituted lethal deer control programs of their own as has the Indiana Dunes State Park, the cultural carrying capacity for IDNL deer is really limited to what level of tolerance the NPS has for the deer. Surprisingly, despite its legal protectionist mandate as containing in its own Organic Act, at least some NPS personnel perceive deer as having adverse impacts on park flora and fauna and, though little direct evidence has been provided to substantiate this perception, this is the basis for the action alternatives and the proposed action to substantially reduce the deer population in relatively short order in an attempt to address the perceived impacts.

A fundamental problem with this perception is that the NPS has convinced itself that the impacts are entirely attributable to deer without apparently considering the wide variety of other factors that may be at play. For example, a change in precipitation amounts or patterns can drastically impact floral production, abundance, diversity, and composition. Depending on the species, drought conditions can drastically alter the ecology of a plant. Fire, including the lack of or suppression of fires, on the IDNL can also, as mentioned in the DEIS, impact floral ecology. Forest type, density, and diversity can also have drastic impacts on floral diversity by preventing sunlight from reaching the forest floor. Historical and modern day land use practices both on and off the park including off-road vehicle use, livestock grazing, and farming can individually and cumulative alter vegetation ecology. For faunal species there are also a variety of factors, other than deer, that can affect their abundance, diversity, density, and very existence on the IDNL. Birds, for example, can be affected by disease, global warming, habitat loss and fragmentation, predators, and human harassment. If the species are migratory the potential impacts are greater since they may be adversely affected on their wintering grounds leading to a decline in abundance on the IDNL. None of these impacts, which are only a mere handful of all potential examples, can be attributed to deer.

These are not hypothetical concerns as the NPS identifies a number of factors that, over time, have adversely impacted the natural character of IDNL. See DEIS at 178, 179, 180. Such factors included: logging changing the composition of the forest and resulting in dune erosion; farming resulting in the drainage of wetlands; introduction of exotic species; extirpation of predatory animals; residential development leading to additional wetland loss; construction of a large number of structures; industrial expansion leading to increases in air pollution (which can impact vegetation production and growth); suppression of naturally occurring fires leading to, in certain ecosystems, increases in canopy and understory density; increased recreational use; urban encroachment resulting in fragmented habitats; construction and use of industrial landfill; and industry and agricultural practices altering ground and surface water resources. Simply put, the IDNL is a highly altered and damaged ecosystem where the concept of naturalness can't be based on what was there historically (due to the significant changes throughout the area) but rather must be premised on what is there now.

More importantly, deer are a native species in Indiana and on the IDNL. They are not an exotic species. They are not vermin. They are not undesirable interlopers. They are a native species that plays a significant and, in fact, dominant role in the ecosystem. Indeed, in many ecosystem deer or similar large ungulates are the dominant species that are key drivers of ecosystem processes. They are, in effect, ecosystem engineers altering floral ecology and forest structure and diversity. These impacts must not be perceived as adverse but merely as impacts that are (or should be) entirely expected in a large ungulate dominated landscape.

If deer stop or slow forest regeneration, why is that perceived to be an adverse impact? Eventually, as the forest ages the trees will die or become diseased and would be then more likely to come down during a severe weather event. A climax forest would then revert to an early successional stage and the process would begin again. If a deer population is present in larger numbers, eventually as its forage resources decline the size of the deer will decline, their condition will decline, their health status will worsen, their reproductive output would decline and the population will drop until it reaches a

particular level consistent with what can be supported in the ecosystem at that time. At that point, habitat condition would ostensibly improve and, particularly if supplemented with ideal precipitation patterns, deer populations will increase. Why is allowing this natural process to play out unacceptable to the NPS? While the presence of large predators may have lessened the size of the peaks and valleys in the fluctuating deer population, deer fluctuations still would occur. What is wrong, particularly in a national park, in letting nature dictate the status and management of native species as required under the Organic Act?

AWI understands that there may be federally and state-protected species found on the IDNL but, considering that there are non-lethal means of protecting those populations (e.g., creation of small or large fenced plots as already practices in the park) this is not a legitimate basis for engaging in the wide-scale slaughter of park deer. Indeed, considering that IDNL was established in 1966, that no lethal deer control has occurred within the park since that date, and that IDNL remains home to over 1445 species of vascular plants of which 1135 are native species, DEIS at 4, is compelling evidence, in and of itself, that there is no “deer problem” within the park. If there was a “deer problem” surely, since the deer have been fully protected since the lakeshore was created, it would have already manifested itself on the precipitous decline in floral abundance, composition, diversity, and production within IDNL. The fact that there is no credible evidence of such a decline suggests that it doesn’t exist and that, while perhaps abundant, the deer are not having the level of impact perceived by the NPS.

While the NPS can choose to perceive deer as having an adverse impact on the park environment it is obligated to consider an alternative interpretation of deer ecology and impacts as described above. While such a balanced approach to deer management and decision-making may be entirely antithetical to the NPS desire to use its bias against deer inherent in the DEIS to justify lethal deer control, NEPA among other things requires that an alternative interpretation or perspective also be made for consideration by the public and agency decision-makers. AWI requests that the NPS engage in such an alternative analysis and consider the benefits and consequences of that in light of its statutory and regulatory mandates and policies.

#### Purpose and Need for Action:

The NPS has failed to substantiate its alleged purpose and need to initiate a wide-scale, lethal deer management plan on IDNL. As an initial matter, the origins of the purpose and need statements, as contained in the DEIS, are not disclosed. Presumably, these were crafted by an NPS planning team though it is unclear if the team relied on any particular standard for crafting these provisions. Considering that these provisions form the basis of the remainder of the document, they are critically important. In other words, since these terms provide the sideboards or parameters under which everything in the deer management plan and DEIS is based, the unilateral construction of these provisions by the NPS considering its clear intent or bias to drastically reduce the park’s deer population immediately raises concerns about these terms. For example, if the NPS had identified a purpose of the plan as “to provide for a holistic plan to maximize the protection of white-tailed deer within the park consistent with the mandate of the NPS Organic Act recognizing that impacts, both beneficial and adverse, will occur and that efforts will be made to mitigate those more problematic impacts using tools

and techniques that will not harm individual deer” the remainder of the plan and DEIS would have been very different than at present.

Thus, considering the importance of these standards to the management of the herd, the standards should have been subject to public review during some earlier stage in the NEPA process. Public review, as previously stated, is “essential” to the NEPA process and that the agencies encourage and facilitate such involvement. This involvement does not have to be limited to the scoping process and commenting on a DEIS as the NPS could have – and should have – invited public comment on various aspects of the plan and DEIS throughout the planning process. This would not establish a new precedent as this author can recall, on occasion, federal agencies providing, for example, the public the opportunity to comment on a preliminary list of alternatives to be considered in an EIS before the remainder of the EIS was published for comment. By providing such opportunities, the NPS would have been demonstrating its transparency and could have avoided compromising the integrity of the entire document and process as a result of its inherent bias against deer.

The offered need for action is to “ensure that the local deer population does not become a dominant force with the National Lakeshore ...” DEIS at 1. The deer management actions contained in Alternative C and D (the preferred alternative), however, suggest that the NPS has already suggested that the deer have already become a dominant force within IDNL, that this is not tolerable, and that, as a result, the herd is to be substantially reduced from an average of 70 deer per square mile to 15 deer per square mile. DEIS at 69. While some may claim that the NPS is being proactive in this case, in effect the NPS is claiming that it wants to act early to prevent the deer from becoming a problem while taking drastic actions which suggest the deer are already a problem. The NPS can’t have it both ways. Either the deer are a problem and action must be taken now to address or mitigate the problem or deer are not yet a problem and less drastic action can be taken now to prevent the deer from becoming, in the opinion of the NPS, a larger problem.

In this case, based on the proposed lethal actions, the NPS has already determined that the deer are a problem. This would mean that the NPS has determined that the deer have met or exceeded the criteria contained in its management objectives. See DEIS at 2. In other words, for example, the NPS has already determined that that the current deer population on IDNL is unhealthy, that lower-canopy and ground-nesting bird habitat is being adversely impacted by overabundant deer, the sensitive and rare species are being similarly affected, the deer browsing is precluding the conservation of vegetation and sensitive plant species, that it is resulting in the extirpation of plant species, and visitor opportunities are being adversely impacted because of deer impacts to the ecosystem, and that the park’s cultural landscape is being compromised by deer. See DEIS at 2. The problem is that the NPS has failed to offer or present any credible evidence in the DEIS to suggest that any of these impacts are real and/or that deer are solely responsible for said impacts.

For example, the NPS concedes that due to the location of the IDNL “in the midst of an urban and industrial setting, as well as increased visitation,” this “has resulted in potential threats to its ecosystem” including an increase in the number of extirpated plant species from 16 to 25 since 1986. DEIS at 4.

Deer are not identified as the cause of these extirpations which are blamed on increased developmental pressures surrounding the island of park habitat and increased visitation to the park.

The NPS has also failed to fully discuss the legislative history of IDNL and the intent of Congress when officially creating the park. The NPS describes said intent as to “preserve for the educational, inspirational, and recreational use of the public certain portions of the Indiana Dunes and other areas of scenic, scientific, and historic interest and recreational value in the State of Indiana.” While this “intent” would appear to apply more broadly than just to IDNL, the current situation with deer in IDNL does not violate this intent and, therefore, this language cannot be used to justify the lethal control of park deer.

The enabling legislation for IDNL is reported to be that the “National Lakeshore shall be permanently preserved in its present state, and no development or plan for the convenience of visitors shall be undertaken therein which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing.” The NPS failed to disclose what the “present state” of the IDNL was in 1966 when the park was created. The literal interpretation of the enabling legislation is that the NPS should have preserved the park in its condition as in 1966 yet, without disclosing what that condition was, neither the NPS nor the public can understand or comment on the implications of such a directive. Presumably, the IDNL has changed significantly since 1966 both purposefully as caused by NPS actions (that could in fact violate this same enabling legislation) and as a result of factors well beyond the control of the NPS.

A careful review of this enabling legislation language, however, reveals that the alleged increase in the abundance of deer and their alleged, but unproven, adverse impacts on vegetation, other species, and the visitor experience is not in violation of this language and, thus, can’t be used to justify the lethal slaughter of the majority of the park’s deer. The enabling legislation explicitly forbids undertaking any development or plan for the convenience of visitors that would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions prevailing (in 1966) in the park. While efforts undertaken by the NPS to promote and accommodate public use of IDNL may have violated its own enabling legislation, even if park deer are adversely impacting the unique flora, fauna, or physiographic conditions in the park this does not violate the enabling legislation.

The so-called “purposes” of the park which are contained on page 5 of the DEIS must be consistent with both the intent of Congress when establishing IDNL and to the specific language in IDNL’s enabling legislation. Three of the four purposes are acceptable and have no bearing on deer management in the park. The first state purpose (preserve, maintain, and restore the integrity and character of the natural resources and processes and protect cultural resource values) is inconsistent with the enabling legislation unless it is directly tied to the prohibition on undertaking a development or plan for the convenience of visitors. In other words, the purpose, to be consistent with the enabling legislation must be “preserve, maintain, and restore the integrity and character of the natural resources and process and protect cultural resource values by not undertaking any development or plan for the convenience of visitors.” It has to be narrowly focused to be consistent with the language of the enabling legislation. If this were done – as it must be – the deer on IDNL, whether they are or are not overabundant and



regardless of their alleged impacts to park vegetation or other species, their presence and alleged impacts would not violate any of the “purposes of the National Lakeshore.”

Even if this purpose is not amended as suggested above and as it should be given the language in the enabling legislation, it still cannot be relied on to justify lethal deer control. This purpose explicitly calls for preserving, maintaining and restoring the integrity and character of the natural resources and processes in IDNL. The role of deer within the park, the fluctuating size of the deer population, and the alleged impacts of deer on park vegetation and other park wildlife are all part of a natural process. While this natural process may not produce the results that the NPS may necessarily prefer, it is a natural process which, this stated purpose, must preserve and maintain. To argue otherwise would require evidence to suggest that the impacts of deer within IDNL are not natural.

#### Scientific Background: Deer and Ecosystem Management:

A fundamental deficiency in the DEIS is that the NPS has failed to disclose much, if any, evidence about actual documented data about the number of white-tailed deer and/or the impacts of the deer within IDNL. Instead, the NPS relies on a studies of deer conducted elsewhere claiming that if the impacts disclosed in those studies are occurring elsewhere than surely they are also occurring in IDNL. This section of the DEIS (i.e., the Scientific Background section beginning on page 9) is replete with references to various studies of the impacts of high density deer population on vegetation and other wildlife in various study sites mainly in the eastern United States. While there is not time to critique each of these studies, there is really no need to do so since those study results may or may not be applicable to IDNL. What’s of greater concern is that the NPS reliance on studies on deer populations in other parks or in other states reveals that the IDNL has virtually no data on the site-specific impacts of deer within IDNL.

This is not to suggest that no studies of deer impacts on IDNL have been conducted. The NPS, for example, indicates that it has established fenced exclosures to evaluate the impact of deer on park vegetation and that it has conducted annual deer spotlight surveys since 1991 and “several aerial infrared surveys.” DEIS at 10. The only results reported from those projects are that “preliminary monitoring data from plots located in the Dunewood deer management zone in the spring of 2006 show enough damage from deer browse to warrant taking management action” and that “deer densities within sections of the East Unit of the National Lakeshore have been estimated to be as high as 98 deer/mi<sup>2</sup> according to aerial infrared surveys.” DEIS at 10/11. Based on an average deer density of 70 deer per square mile on the East Unit and 35 deer per square mile in the West Unit, the NPS claims there are 1,162 deer in IDNL, DEIS at 59, yet the accuracy of this estimate is far from certain. The NPS concedes that “this is the extent of active deer management efforts undertaken at the National Lakeshore.” DEIS at 10. More accurately, the NPS should have stated that this is the extent of active deer research efforts at INDL.

What the NPS fails to disclose are the methodologies used to monitor or measure deer impacts through its establishment of exclosures including how the location of the exclosures were selected, how the exclosures were constructed, how the location of the monitoring plots (the areas used by deer for

comparison to the data collected from the exclosures) were sited, the data collection procedure, and other factors that may have influenced vegetation production and growth at the time (namely precipitation patterns). Such information is essential to determine if the methodologies were acceptable. For example, if the exclosure in the Dunewood deer management zone was placed in an area with highly palatable deer food, the fact that data were collected demonstrating damage from deer browse is entirely expected. It should be noted, however, the alleged damage reported in the DEIS is based on preliminary monitoring data. Interestingly, though that preliminary data was collected in or before 2006, the NPS does not disclose any final data on deer impacts within the Dunewood deer management zone.

Similarly, with the spotlight counts and aerial infrared surveys, the information provided by the NPS is virtually useless. The NPS fails to disclose enough information about the methodologies used in the aerial surveys and it even fails to disclose the results of the spotlight counts conducted from 1991 to the present. Why is this information not disclosed in the DEIS? If it is, indeed, available and the research was actually done, it must be disclosed in the DEIS. The fact that the NPS has apparently elected to maintain this data under a shroud of secrecy could be interpreted to suggest that the data does not support the proposed slaughter of the majority of the park's deer population as is clearly the desire of the NPS. The fact that deer density was measured at 98 deer/mi<sup>2</sup>, if that even is true, means nothing within an indication of when that measure was made, the methodology used during that aerial survey, any assumptions contained in any subsequent modeling exercise to develop that estimate, and whether the survey was park wide or if extrapolation was employed. If that deer density estimate was from 2000, for example, the current density could be much different and, indeed, it could be much lower.

In its description of the effects of deer on ecosystem diversity at IDNL (DEIS at 11), again, the NPS provides no specific data or evidence suggesting that deer are having any adverse impact on the park ecosystem. Instead, the NPS elects to deal in generalities and supposition referring to studies done elsewhere claiming, in effect, that if it happened there then it must be happening here. If the NPS doesn't have the data necessary to credibly document the impacts of deer on IDNL or it refuses to disclose the data that it does have, then it must admit as much and set about on a course to conduct the necessary studies, collect the necessary data, and then resume its efforts to craft a deer management plan. At present, without such data, the NPS is effectively telling the public to "trust us we know what is best for IDNL and for the deer" which is not consistent with the requirements of NEPA, does not reflect proper, scientifically-based planning, and is demonstrative of an exceedingly arrogant attitude that is entirely dismissive of the intelligence and opinions of the public.

Similarly, the ecosystem diversity thresholds contained in the DEIS (see page 12) are based on measures taken elsewhere which the NPS assumes, with no credible analysis, would be applicable at IDNL. Again, if the NPS wants to establish such thresholds they should be based on credible studies of the impacts of deer on IDNL.

Such studies must also take into account the other variables that are impacting park vegetation, other wildlife, water quality, etc... These are not obscure variables made up to deflect the focus from deer but, rather, these are real variables that the NPS even concedes exist. For example, the NPS concedes

that invasive (nonnative or exotic) plant species are a serious threat to the vegetation at IDNL. DEIS at 15. Though IDNL has no formal management plan for invasive species, it is reportedly working to address this threat yet it remains an ongoing problem. DEIS at 25, 174. Similarly, the gypsy moth, Asian longhorn beetle, and emerald ash borer may also adversely impact park trees while fire, or the suppression of fire, has and continues to result in the loss of many open habitats, the alteration of such habitat, the reduction in habitat diversity along with the concurrent reduction in plant and animal diversity. DEIS at 16/17. Despite these impacts, current NPS policy is the suppression of all wildland fire but the selective use of prescribed fire.

#### Authorization for Lethal Deer Control:

One of the most egregious examples of the NPS misinterpreting its own legal mandates and misleading the public to justify the proposed massive lethal deer kill is the discussion of the authority under which the NPS can undertake the slaughter. The NPS cites to its Organic Act and its Policies as justification for its planned assault on the IDNL deer. DEIS at 12, 26. Specifically, it claims that its duty to prevent the impairment of the park provide a green light to engage in the proposed deer cull since, the NPS claims, the deer are damaging park vegetation, harming other wildlife, and impairing public use. See, e.g., DEIS at 191. Of course, not only has the NPS failed to provide any credible data documenting such impact but its entire justification for claiming to have the authority to engage in the slaughter is baseless.

The impairment standard contained in the NPS Organic Act is not applicable to the impacts of any native wildlife species on the park. If it were, the NPS would have used it long ago to control any assortment of species that allegedly adversely impact the parks. This has not been done and, frankly the NPS has not, until recently, interpreted the Organic Act to apply to the management of native wildlife, because there is no legal basis for such an interpretation. The impairment language in the NPS Organic Act very clearly only applies to public use of the parks. More specifically, the first clause of the Organic Act imposes a mandate on the NPS to conserve the scenery, the wild life, and other attributes of the parks. The second clause adds to that mandate by requiring the NPS to regulate the public's enjoyment of the parks in such a manner and by such means "as will leave them unimpaired for the enjoyment of future generations." DEIS at 12. Thus, the primary mandate of the NPS is conservation as the courts have repeatedly held throughout the years. The secondary mandate, which is subservient to the conservation mandate, is to permit public use of the parks but only in ways that will not harm the parks. The impairment standard only applies to the public use of the parks. If a public use results in an impairment, it either must be modified so that it won't impair park resources or it can't be allowed. Applying the impairment standard to native wildlife is purely wishful thinking on the part of the NPS. Since the impairment standard cannot be applied to the impact of native deer on park vegetation or other park resources, the assessment of the impairment of each alternative in Chapter 4 of the DEIS is invalid, meaningless, and unnecessary.

The NPS attempts to support its claim citing to New Mexico State Game Commission v. Udall. Though this case is 40 years old, the NPS believes that it supports its outlandish interpretation of the Organic Act and the impairment standard. In reality, it doesn't. That case was primarily about state's rights over the management of wildlife on federal lands. The origins of the case involved a plan by the NPS to lethally

removal 50 deer from Carlsbad Caverns National Park for research purposes in its effort to devise a deer management strategy. The New Mexico State Game Commission filed suit claiming that it controlled the management/hunting of deer on public lands in the state and that, therefore, the FWS had to get a permit from the Commission to engage in this research. While the NPS pulled from the court's opinion language that, on first blush, would seemingly prove its point, the court's ruling pertaining to the narrow question of whether the NPS had the authority to kill deer on park lands for research purposes without obtaining a state permit. This is a far cry from the NPS claim that this case provide the authority it needs to implement a multi-year lethal sharp shooting campaign designed solely to rid the IDNL of the majority of its deer.

The NPS then turns to its Management Policies in an attempt to justify its alleged authority. Again, this attempt fails as either the NPS Policies actually promote protecting the deer and the natural factors/processes that control the population or the policies, again cherry-picked by the NPS to substantiate its argument, are not applicable or cannot be met. For the purpose of this argument, let's focus solely on the Policies identified in the DEIS. First, the Policies claim that the NPS can remove animals from a park when there are unnaturally high or low concentrations of animals as a result of humane influences (including the extirpation of predators) and such influences cannot be mitigated. In this case, the NPS has provided no credible evidence that the IDNL deer population exists at an "unnaturally high density" or that, even if it did, the impacts could not be mitigated. All the NPS says is that at some time in the past, on one unit of the IDNL it estimated 98 deer/mi<sup>2</sup> using a survey technique for which the methodology of remains undisclosed. Does this estimate suggest an unnaturally high density? If so, was this limited to a small area of the park only? Moreover, if this constitutes an unnaturally high density, the impacts surely can be mitigated either through the use of selective fencing, implementation of an immunocontraceptive or other birth control program, increase in lethal deer management outside the park, use of repellents, etc... Instead of reviewing and evaluating each of these options to determine if they would be applicable to mitigate the impacts which the NPS Policy requires before the animal(s) is/are removed, the NPS literally simply threw up its hands without any solution and reached for the rifles.

The intent of the Policies allowing active, lethal management of park wildlife was not to turn the parks into live shooting galleries but, rather, to selectively and rarely use this authority when and where there is a legitimate basis for doing so. This is reflected in NPS Policies which specify that whenever possible, natural processes will be relied upon to maintain native plant and animal species, and to influence natural fluctuations in populations of these species. DEIS at 27. Legally, as permitted in the NPS Organic Act, the only justification for the use of lethal control to remove animals from a park is provided under 16 U.S.C. 3 which gives the Secretary the authority to destroy park wildlife when those animals may be detrimental to the use of the parks. This authority is also not open ended as it is limited to killing animals whose impacts are detrimental only to the use of the park, not if they overbrowse the vegetation or harm other wildlife. The terms "the use of" clearly refers to the public's use of the park so, to exercise this authority, there must be evidence that an animal or animals are adversely affecting the public's use of a park. This authority, for example, was correctly applied years ago in Grand Canyon National Park to lethally remove some deer who had become dangerous to the public after becoming

accustomed to being fed by canyon visitors. In that case, the NPS removed had the authority to lethally remove the offending animals because they were affecting public use of the park; the NPS most certainly did not have and could not have even obtained authority to engage in the massive use of lethal control simply because the deer in Grand Canyon were eating the bushes. In the case of IDNL, while there's no question the deer are eating the bushes, there is no evidence beyond mere speculation by the NPS that the deer are adversely impacting public use of the park. Indeed, there is compelling evidence that the public enjoy and benefit greatly from the deer even if, in the opinion of the NPS, they exist at a density that is too high.

While the NPS failed to disclose a great deal of its information on the deer population and vegetation in IDNL, it did disclose data about visitor use. Use patterns have fluctuated from 1990 through 2005 though the peak annual visitation was recorded in 2005 when 2,127,336 people visited IDNL. DEIS at 147. The majority of visitors come to IDNL for the beaches with swimming, sunbathing, and picnicking among the most popular activities. Hiking is also popular as is auto touring, camping, hiking, horseback riding, biking, skiing, bird watching, boating, fishing, watching wildlife, and looking for plant species according to the NPS. The NPS asserts that some even visit the IDNL just to see the Karner blue butterfly. DEIS at 148. Based on the charts provided in the DEIS (page 149) it is abundantly clear that the majority of activities of IDNL visitors are unrelated to wildlife. The reasons given for visiting include, at the top, to enjoy nature though, based on activities, that reason likely has little to do with the wildlife species that inhabit the park.

The NPS does, however, admit that "seeing deer is generally a positive experience for most National Lakeshore visitors." DEIS at 148. No specific statistics are provided for the number of annual visitors or the percentage of total visitors who enjoy seeing deer. Similarly, no such data is provided for people reported by the NPS to come to IDNL to watch birds or engage in botanical research. It is suspected that this number, if such data exists, would pale in comparison to the number using IDNL beaches. The NPS importantly concedes that "lakeshore staff are not aware of a reduction in bird sightings as a result of over-browsing and have not received complaints from birdwatchers about reduced sightings." DEIS at 151. This is potential evidence that the deer density in IDNL is not too high as suggested by the NPS and that they are not adversely impacting bird species using the park. Though the Pinhook Bog is only available for touring on ranger-led tours, the NPS fails to provide any data on the number of people taking such tours annually.

Despite the generally increasing visitor numbers and the data on why people visited IDNL and the activities they participated in once there, the NPS is certain that without engaging in the slaughter of the majority of the deer on IDNL, visitor satisfaction will decline. There is simply no evidence to suggest that is the case and, if anything, the evidence suggests that large numbers of people who have enjoyed seeing deer on IDNL will be horrified when their opportunities to view deer are significantly reduced and when they find out why. As an aside, given the relatively low number/proportion of visitors who participate in the fall harvest festival at the Chellberg farm site on the IDNL site, the mere fact that there has been no corn to harvest since 1999 because of deer is inconsequential. Furthermore, the fact that Chellberg farm is still operated as a farm with the agricultural lands planted with corn and possibly other crops simply adds to the alleged deer problem by intentionally planting a desirable food source for deer.

### Desired Conditions:

The NPS discloses five self-serving desired conditions to justify its plan for lethal deer control. These conditions suffer from some of the same deficiencies as identified previously – no evidence to demonstrate that these conditions have been met or exceeded given current conditions in the park and no effort by the NPS to be transparent in the establishment of these conditions. The NPS claims that its desired conditions are connected to the plan’s purpose, needs, and objectives which were previously discussed and challenged.

A fundamental problem with the desired conditions is that they were crafted unilaterally by the NPS. By not subjecting the creation of the conditions to public review, the NPS was given (and took) a free pass to craft the conditions to justify lethal deer control. Independent of whether the conditions themselves are consistent with the park’s enabling legislation – they are not – failing to provide the public with a meaningful opportunity to help define what the desired conditions could and should be negates their value entirely.

A brief review of each of the stated desired conditions is warranted.

The first is to maintain a healthy white-tailed deer population within IDNL while protecting other park resources. The NPS offers no evidence to suggest that its current deer population is not healthy. Nor does it even define what it considers to be a healthy deer population. There is, in fact, no evidence to suggest that the IDNL deer population is not healthy. There is no evidence, based on the information in the DEIS, of disease in the herd, no evidence of an unusual problem with parasites on or within the deer, and no evidence that the deer are in poor condition. Arguably, while the NPS avoids disclosing credible deer population estimates, if the population is as large as the NPS believes it to be the individual deer must be quite healthy to sustain such densities. Moreover, the habitat also must be quite healthy and/or productive to support what the NPS clearly believes is both an overabundant but also a growing deer population.

The second pertains to protecting lower-canopy and ground-nesting bird habitat from unacceptable adverse impacts from overabundant deer browsing. It has already been made clear that the NPS offers no credible evidence demonstrating that the deer population is overabundant. It has also offered no credible evidence to suggest that lower-canopy and ground-nesting birds have been adversely impacted by deer in IDNL. Nor has it evaluate the myriad of other threats that may be adversely impacting birds (assuming they are being impacted at all) including global warming, development pressure, predation, harassment by humans, habitat fragmentation and loss, habitat loss within wintering areas, and disease. Of course, this condition does not focus on the impacts to the actual lower-canopy and ground-nesters but, rather, only pertains to the habitat for such species. Nevertheless, the NPS has offered no credible evidence that the deer are adversely impacting even the habitat.

The third condition pertains to the protection of habitat for rare and sensitive species from unacceptable impacts related to deer browsing. Please note that unlike the previous condition that pertaining to overabundant deer browsing this condition is only focused on deer browsing in effect lowering the bar for the NPS so that it can claim that the mere fact that a deer eats vegetation may

meet or exceed this condition. While the DEIS contains information on a number of rare and sensitive species – the majority of which are state-listed species – it is unclear how many of them are actually found within IDNL (versus in the entire state of Indiana or within the multi-county area in which IDNL is located) or whether deer browsing is adversely impacting the habitat for these species. This cannot be ascertained because, yet again, the NPS either does not have the data to demonstrate such impacts or it has elected not to disclose such data in the DEIS.

The fourth condition is to ensure that deer browsing does not preclude the conservation of vegetation and sensitive plant populations. This is like saying that parents must ensure that the candy eaten by their children on Halloween will not cause cavities – it is an impossible standard or condition to meet. No one questions that deer browsing causes impacts. The question is whether the level of browsing adversely impacts vegetation and sensitive plant species in a way that is causing a permanent loss or diminishment in the production of the species. The NPS has simply not provided data or any evidence, beyond citing to studies from other areas and/or ecosystems, to suggest that the deer on IDNL are causing such impacts.

Finally, the fifth condition is to not allow deer browsing impacts to lead to the decline or extirpation of rare plant species. Again, this is like telling a person that as he/she ages that his/her eyesight quality must not decline. It is a preposterous standard. Though the more rare a species is the less likely a deer will actually find and eat it, if the species is particularly palatable there's no question that a deer could eat it and that the individual plants so consumed could, consequently, be adversely impacted. Deer, of course, have to eat to survive so the actions of the deer are entirely natural – a fact that the NPS is apparently attempting to ignore. Whether a deer eating a plant can or will lead to the extirpation of the species is a huge leap. The NPS has provided absolutely no evidence that deer browsing on IDNL has resulted in any decline or extirpation of rare plant species. The NPS has, however, disclosed that other factors, including developmental pressures and increasing visitor use, has resulted in plant extirpations. Perhaps then, the NPS should consider closing the IDNL to all use in order to protect the plants and to increase the chance of satisfying this desired condition.

The NPS then goes on to define other terms as it creates this self-serving set of conditions and terms that are clearly intended to limit the options of the decision-makers to a single decision – to kill deer. First, it describes a viable deer population as “one that allows the perpetuation of a healthy and sustainable ecosystem while maintaining a healthy deer population in the National Lakeshore.” DEIS at 19. A “healthy and sustainable ecosystem” is not directly defined but such a definition would include the approximation of natural conditions in an ecological community that has the ability to maintain species richness. Again, the NPS fails to define what constitutes a “healthy deer population” nor does it provide any evidence that the deer population on IDNL is not healthy. The concept of natural conditions could and should include the preservation of natural processes and the allowance for such processes to dictate the ecology of the park – which is entirely consistent with the natural regulation mandate of the NPS. If the protection of natural processes were of paramount importance, the species richness within the park would naturally vary which would be expected in such a system. The preservation of a static level of species richness is largely inconsistent with the mandate of the NPS and is more reflective of a management strategy used by the U.S. Forest Service who can legally manipulate their lands to maintain

a constant state of high biodiversity by artificially creating various successional habitats. The NPS is not, nor should it be, in the business of such intentional manipulation of habitats and, therefore, its embrace of the concept of maintain species richness at a high level no matter what reflects a desire by NPS managers and not a biological reality given the legal mandates of the NPS.

#### Scoping Process and Public Participation:

There is no question that the NPS complied with the requirements that it engage in scoping in preparation of the EIS. Of course, the NPS did the minimum necessary to meet this requirement instead of electing, as it could and should have, to embrace transparency and to provide the public with multiple meaningful opportunities to participate in this planning process. It should be noted that during the scoping period the NPS received 811 comments favoring a non-lethal method of deer management and opposing use of any lethal method while it only received “some comments “ supporting lethal methods. Unfortunately, despite the overwhelming public support for a non-lethal management program, the NPS has, at it has traditionally done, thumbed its nose at the majority opinion in favor of its desired, and likely illegally predetermined, course of action.

In regard to this section of the DEIS, several issues are worth mentioning. First, the NPS inclusion of water quality as an issue and impact topic is, frankly, preposterous. The notion that deer fecal matter is compromising water quality in or around IDNL given all of the anthropogenic impacts to the quality of the water supply particularly in this region of the country and Indiana is not even comparable. The impacts of industrial development, residential construction and use, agriculture, highway, vehicles, etc... to the region's and park's water quality far exceeds any impact associated with deer pooping in the water. The primary stated concern in regard to water quality is with fecal coliform bacteria or E. coli. The NPS concedes, however, that there are a variety of potential sources of E. coli independent of deer fecal matter. For example, the NPS reports that:

Point and non-point sources of E. coli in the vicinity of Indiana Dunes National Lakeshore include discharges from municipal and industrial wastewater treatment plants; combined sewer overflows (overflows during rain events or snow melts from combined sewer systems designed to collect stormwater runoff, domestic sewage, and industrial wastewater into the same pipe); sanitary system overflows (equipment failures and other sewer overflows not related to combined systems); illicit discharges (illegal or improper connection to a storm drain or a “straight pipe” to receiving waters) stormwater runoff (including runoff from pastureland/cropland; residential septic systems; pets; wildlife; livestock; swimmer, beach sands, and algae; boaters; and contaminated sediment. DEIS at 105 citations omitted. See also, DEIS at 100, 185, and 203 for additional sources of water pollution in and outside of IDNL.

While this impact topic should remain in the analysis to demonstrate that significance of the human impact in the region, any discussion of deer fecal matter as a threat to water quality should be removed.

Chronic wasting disease is certainly an issue that has received considerable attention over the past 15-20 years, including by the NPS. While state wildlife agencies see this disease as a serious threat to the well-being and abundance of certain ungulate species, their concern is in part motivated by the



economic revenues generated by hunting and the potential loss of said revenues if a CWD outbreak were to occur and/or if the ungulate population, either in response to the disease, or due to the management response to the disease declines precipitously in number. The NPS is not motivated by the same concerns but rather, as a good neighbor, apparently feels an obligation to assist state wildlife agencies with monitoring for the disease and doing its part to help control the disease if it is detected within a park. One problem with this approach, however, is that if the organism that causes CWD is a native species the NPS has no authority to eradicate it regardless of its threat to native ungulates.

The NPS is quick in the DEIS to blame deer numbers and densities for posing a threat to public safety due to Lyme disease. It completely fails, however, to explain the role of rodents, particularly the white-footed mouse which is found on the IDNL in the life history of the deer tick. The reality is that, while deer can be a host to the deer tick, white footed mice are an even more important host. In addition, the NPS has not apparently bothered to conduct any type of invertebrate survey or sampling efforts to determine densities of deer ticks and to submit samples to laboratories to identify the proportion of the deer tick populations infected with the Lyme disease bacterium.

The NPS fails to provide a substantive discussion about CWD, its origins, its pathology, its epidemiology, and/or whether it is considered a native or exotic disease. Admittedly, there remains much to learn about CWD but enough is now known after decades of research that the NPS should have provided more information in the DEIS. Of particular importance from the perspective of the NPS is this question of whether the organism that causes the disease a native species. Until and unless that information is disclosed the NPS would be acting prematurely and possibly illegal to specify or guarantee that it will work cooperatively with any state wildlife agency to control and eradicate deer infected with the disease on park lands. The lack of action may go against the basic human desire to help creatures in need or to cure the ill but disease is a part of nature, it is one of the factors that helps to regulate wildlife populations.

The NPS states that the IDNL is home to some 123 state-listed rare or sensitive plant species. Presumably none of these species, or very few, are actually only found on the IDNL. What the NPS fails to provide, however, is information about the abundance of said state-listed species on the IDNL compared to other areas adjacent to the IDNL, in the multi-county area in which the IDNL is located, or within the entire state of Indiana. This is critical information to assess the significance of the state-listed plant species population that is found within the IDNL. If, for example, a mere fraction of all of the state-listed species of a particular plant are found on IDNL while the vast majority are found elsewhere perhaps in an area that is better protected from the myriad threats, which may or may not include deer, this is important information to disclose and for the public to consider when evaluating the impacts of the proposed action and its alternatives.

The sole federally listed (threatened or endangered) species that is known to permanently occupy IDNL is the Karner blue butterfly. This species relies on lupine as its sole food source which also happens to be a palatable deer plant. The NPS claims that deer consuming wild lupine could adversely impact the butterfly, DEIS at 22, yet it also claims that, through its management and restoration efforts, the butterfly population is increasing and its habitat is expanding. Clearly, despite the NPS claim that the

deer on IDNL are overabundant and are adversely impacting park vegetation and other wildlife, the blue butterfly population would appear to be secure and expanding. This would be evidence, however, that the deer population is not as large as predicted by the NPS and/or its impacts on wild lupine have been overstated. Other federally listed species are also believed to occur on IDNL and/or occur on a seasonal basis.

In regard to its discussion of visitor use and experience in the DEIS, the NPS has no evidence to suggest that the deer population has adversely impacted any user group and so it has made up such evidence by suggesting that visitors who come to IDNL to watch birds or search for rare plants may be less satisfied as deer number increase and rare plants and birds are negatively affected. DEIS at 22. The NPS offers no data to demonstrate that any visitors come to the IDNL for either of those purposes or, if such data existed, that the quality of their experience has been diminished by the deer. The NPS should stick to the data it has and not manufacture claims that have absolutely no basis in fact.

Finally, in regard to the socioeconomic impacts associated with deer damage the NPS (and other federal agencies) commonly examine only the alleged economic impact of, in this case, deer on landscaping, agricultural crop production, deer-vehicle accidents, etc... to calculate a socioeconomic impact. All too frequently agencies, including the NPS, only examine that economic impacts attributable to deer. This is precisely what the NPS has done in this case. Deer, of course, have positive economic impacts that are frequently overlooked and/or discounted despite their relevance and the NPS duty to objectively consider both positive and negative economic impacts attributable to deer. Such positive economic impacts are associated with the aesthetic beauty of deer, their value to park visitors who enjoy observing/photographing/drawing them, and their existence values for those who never get to visit IDNL but know (and obtain joy from) that they are present on IDNL. While the socioeconomic impact section of the DEIS needs to be substantially improved independent of the need to consider the positive economic impact of deer, at a minimum, the NPS should an economist (in house or on contract) to assess the value, intrinsic and extrinsic, of wildlife on IDNL, wildlife inhabiting national parks, and of the national park experience.

#### Initial Deer Density Goal:

The NPS has established an initial deer density goal of 15 deer/mi<sup>2</sup>. DEIS at 35. While that goal can be adjusted up or down through the so-called adaptive management elements in the plan, DEIS at 69/70, initially this will be the management goal of the NPS meaning that, depending on current deer density, a large number of deer could be killed and removed from the park. The concept of adaptive management has become an oft-used, if not over-used, buzzword among federal agencies. Though few agencies actually practice adaptive management and even fewer understand what it really is, it's a term and concept that allows an agency to suggest to or to deceive the public into believing that the agency will act reasonably and rationally and though its initial proposal may seem draconian things could improve given adaptive management. Unfortunately, once an agency finalizes and implements its draconian plan it rarely exercises the process of adaptive management or waits so long to adapt the plan that the damage has already been done and animals have been killed unnecessarily.

The deer density goal for the IDNL has been set by the NPS with absolutely no input from the public. As is the case for many of the decisions made by the NPS during its planning process, taking unilateral action without public input is preferred since the NPS can then entirely control the outcome of the process without having to bother with or spend time considering the input of the public, its constituents, and, frankly, the employer of all NPS employees. Had the NPS provided the public with an opportunity to participate in this planning process, perhaps the outcome would have been different. Perhaps the public could have provided evidence from the white-tailed deer or botanical literature suggesting that a density goal of 40-50 deer/mi<sup>2</sup> would be sufficient as a starting point for IDNL. The public, however, was not provided that opportunity.

Instead, the NPS selected the goal on its own relying solely on studies of white-tailed deer impacts on vegetation conducted elsewhere. The NPS considered absolutely no study or data related to IDNL to create this deer management goal. The lack of the use of any park-specific data to establish this goal is of no surprise considering the NPS reliance on such non-IDNL studies to justify its actions throughout the DEIS and the apparent paucity of IDNL specific data. At a minimum, the NPS should endeavor to obtain the park-specific data for the IDNL and then develop a park-specific deer management goal instead of relying on studies from elsewhere to develop said management goal.

#### Indicator Species and Thresholds for Taking Action:

The NPS has identified a number of indicator plant species and alternative indicator plant species that it intends to use to monitor the impact of deer on vegetation within IDNL. These so-called “indicator plants” are species that have either been documented in the literature as a deer browse indicator or have life history characteristics similar to other documented deer browse indicator species and are expected to provide similar results. Overlooking the fact that the NPS has a mandate of natural regulation and that, therefore, using indicator plant species as a trigger for lethal deer control violates that mandate, the collection of data for research purposes to assess and monitor the trends in the impact of deer on vegetation species within IDNL is certainly appropriate. While it would not be expected that the NPS would select non-palatable species to monitor the impact of deer on vegetation, the selection of only species that are palatable to deer will not only overestimate the impact of deer on vegetation in IDNL but it was likely done purposefully by the NPS to ensure that its triggers are met and that its proposed massive deer culling plan can go forward. A more appropriate methodology to track deer impacts would have been to identify a mixture of highly palatable to non-palatable species to monitor within IDNL. While the highly palatable species would likely still absorb the brunt of the browsing impacts, such a methodology would allow for the monitoring of the status of the moderately and non-palatable species along with the concurrent routine assessment of deer population size. Over time, if the highly palatable species declines in abundance while the moderately and non-palatable species increase followed by a decline in the estimated number of deer, this could provide evidence of nature regulating the deer population. This is not to say that such a relationship would be found but studying such a relationship over the long term is consistent with the NPS legal mandate while embarking on a deer killing spree is not.

The indicator plants identified by the NPS are white baneberry, jack in the pulpit, four or five trillium species (depending on what page in the DEIS you consider – compared, e.g., page 36 to 37), two Solomon’s seal species, two false Solomon seal species, two Canada mayflower species, and lupine. Depending on the level of documented impact to these species, lethal deer control could be implemented. The NPS establishes standard measurements for each species or group of indicator plant species as indicators of deer impacts (see DEIS at 38). What the NPS fails to do, however, is to assess how non-deer impacts to these species may affect, for example, their basal stem height, overall plant height, and other important characteristics. This should have been an obvious requirement for the NPS though, perhaps, to simplify the planning process and/or to save time the NPS elected not to consider such threats – threats that it concedes exist.

For example, how does short or long-term drought impact these indicator plant species characteristics independent of any impacts attributed to deer. Remarkably, despite the importance of precipitation (both in terms of amount and timing) in influencing vegetation productivity, growth, composition, abundance, etc... the NPS never even address this issue in the DEIS. There is not a single reference to short or long-term precipitation patterns or amounts on IDNL and no precipitation data is included in the DEIS. The NPS does, however, concede that “precipitation, in the form of both rain and snow, is possibly the most important climatic feature that influences the composition of plant species in the Eastern Deciduous forest.” DEIS at 85. How the NPS could include such a statement in the DEIS and then completely fail to include any data or analysis of precipitation patterns or levels for IDNL is astounding and demonstrates a blatant deficiency in the DEIS analysis.

How do invasive plant species impact these native, indicator plants? If invasives are a problem on the IDNP, as the NPS concedes they are, are they outcompeting the native species causing them to be less productive, vigorous, to the point of impacting their basal stem height or overall plant height? If invasive species weren’t present in the park, would the indicator plant species be healthier, more abundant, and grow faster and taller?

What about wildland fires, or the lack thereof on the IDNP. The NPS also concedes that fire has a significant impact on vegetation ecology on IDNP. If fire suppression was not the policy of the IDNP would current vegetative conditions on the IDNP be significantly different than what actually exists today? Would plants species be more rigorous, abundant, more productive, or would they grow taller, denser, and faster? Would a different assemblage of floral species exist on the IDNP if fire was more frequent on the park as perhaps it was historically?

Within the forested areas of IDNP, are closed canopies adversely impacting herbaceous vegetation? This would certainly be expected depending on how dense the canopy is and whether any sunlight is reaching the ground. If indicator plant species are monitored in fully or even partially closed forest habitat, the canopy will indisputably impact the results which the NPS may then attribute to deer.

Finally, what is the impact of global warming on vegetation within IDNL. Global warming impacts, as has been well documented recently in the published and gray literature, are no longer theoretical concerns for the future but are real impacts occurring today around the world. Indiana is no exception. While it

is very likely that the NPS has yet to even begin to collect data to understand the changes being brought about by global warming, those changes are happening. If, as a result of global warming, the IDNL is subject to warmer temperatures (on average), less precipitation, more variable precipitation, change in precipitation patterns, increase in invasive species as a result of a competitive advantage in a warming world, increase in potential novel and harmful soil bacteria or plant diseases, and increase in defoliating insects (native or exotics), and/or any number of other consequences of warming, surely the park's vegetation structure and ecology will change, perhaps drastically. These type of impacts have to be, but have not been, considered by the NPS.

These are just a few examples of the types of non-deer impacts to vegetation, including to the indicator plant species, that should have been evaluated by the NPS so that it can distinguish between deer impacts to indicator plant species and those impacts attributable to other factors. Without such an analysis, the NPS will most assuredly attribute all impacts documented on indicator plant species to deer thereby ensuring that their deer killing triggers are met even though the condition of the indicator plant species may be a function of other existing threats to the vegetation.

As evidence that the NPS has little to any IDNL-specific vegetation data, the DEIS indicates that the NPS would first monitor these indicator plants for two years before it would assess whether the triggers have been met to initiate lethal deer control actions. DEIS at 37. Not only does this provide ample evidence that the NPS could and should have extended the deadline for comments on the DEIS as requested by AWI and HSUS but, more importantly, it demonstrates that this entire planning process is, at best, premature. NEPA requires agencies to base their environmental analysis on high quality information and expert analysis or, if data relevant to the analysis does not exist, the agency must, if the information is essential to the analysis and the overall cost of obtaining it is not exorbitant, then it must be included in the analysis. Alternatively, if the required information cannot be obtained due to costs, the agency must include a statement conceding that the information is incomplete or unavailable, a statement of the relevance of the incomplete or unavailable information to evaluating the impacts, a summary of existing credible scientific evidence relevant to evaluating the adverse impacts to the quality of the human environment, and the agency's evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community. 40 CFR 1502.22(a)(b)(1-4).

In this case, the information missing from the DEIS is clearly essential to the analysis and the NPS can make no legitimate argument that its acquisition would be too costly to justify since some of it is presumably already in the IDNL files. Consequently, the first option is applicable here meaning that this planning process should be suspended pending the acquisition of said data. Instead of complying with these terms of NEPA, in this case, the NPS has done none of the above. It has failed to gather or disclose high quality information in the DEIS (largely because such high quality information does not exist or is severely lacking), it has not provided expert analysis (which is impossible without high quality data), and it hasn't complied with NEPA's direction regarding incomplete and unavailable information as summarized above. As a consequence, its analysis is based purely on speculation of what the NPS thinks will happen if its indicator plant monitoring data triggers lethal deer control.

If the NPS has any interest in actually complying with the requirements of NEPA it must suspend any further work on the DEIS, engage in comprehensive studies of the vegetation and deer population within IDNL, gather the relevant data over two or more years of field research, analyze the data, amend or supplement the EIS to include full disclosure of the data, reissue the DEIS, as supplemented or amended, for public review, and then complete its planning process. Anything short of this scenario which results in the completion of the current planning process will violate NEPA and likely other federal laws, including the NPS Organic Act, and would be subject to challenge in a court of law.

#### Alternatives:

NEPA requires federal agencies to consider a reasonable range of alternatives. The alternatives considered in the DEIS have become the standard alternatives considered by the NPS in other environmental analyses relevant to deer management (see, e.g., the Valley Forge National Historical Park Deer Management Plan and EIS). The four alternatives considered do not reflect a reasonable range of all potential alternatives. Other alternatives that could and should have been considered, that may or may not be supported by AWI, include:

A research-oriented alternative whereby the vegetation, deer, and other elements within IDNP would be subject to a comprehensive monitoring study to document how these elements change over time as conditions change, populations increase and decrease, stochastic events occur, the climate warms, etc... National parks, like IDNL, provide excellent potential research laboratories to conduct credible and comprehensive long-term natural studies.

A more aggressive non-lethal management alternative. This alternative assumes that there is, indeed, a legitimate reason or basis to justify a reduction in IDNL's deer population. This alternative would combine the options considering in Alternatives B and non-lethal deer management controls, including immunocontraception, in a single alternative which would entail a much more aggressive approach to the implementation of an immunocontraception, fencing, and repellent application effort within IDNL. A team of skilled and experienced persons would be assembled (paid for through a possible combination of public and private funds) to carry out this alternative over a 4-5 year period. Just like a team of sharpshooters may be used to kill deer under Alternative C, a team of shooters would be used to remotely deliver the immunocontraceptive vaccine to IDNL deer under this alternative allowing for the treatment and retreatment, if necessary, of as much of the entire deer population as is possible over a multi-year period. This approach would, during the life of this plan, result in a noticeable decline in deer numbers while avoiding a large scale slaughter operation. In addition, through the strategic use of fencing, repellents, and other non-lethal deer management tools, rare and sensitive plant species would be identified and, at least temporarily, protected until they reach a size, abundance, or density when the fences can be removed. While this alternative would require cooperation with the state wildlife agency and local communities, it is not a theoretical pipe dream but is, in fact, a viable and realistic option. Should the NPS consider exploring this type of alternative, AWI would be willing to help develop, evaluation, and seek funding to help support the plan.

In regard to Alternatives B and D, both of which propose the use of non-lethal reproductive controls such as immunocontraceptives, the NPS has established standards or requirements for the use of such methods are overly restrictive. While the standards contained in the IDNL DEIS are similar to those contain in the Valley Forge DEIS, some are even more restrictive such as the requirement that the vaccine be good for a period of four years. Regardless of the standards themselves, the NPS has provided absolutely no explanation for why it developed such standards or the process used to compile the standards. Did the NPS consult with the leading researchers studying the use of non-lethal deer control agents, including immunocontraceptive vaccines to compile these requirements? If not and considering that the NPS certainly did not involve the public in the development of the standards, then it must have developed them internally and, in so doing, created standards that are self-serving and that will ensure the non-lethal reproductive control will not be implemented anytime soon allowing the NPS to proceed with its planned lethal management program. This is, yet another, example of the extreme bias against deer demonstrated by the NPS. At a minimum, the NPS must provide a rational explanation for its decision to create such standards. Ideally, however, it should repeal such standards and develop standards that are more realistic, that would allow immunocontraception and similar non-lethal reproduction control techniques to be used immediately and regardless of cost or convenience t (or lack thereof) for the NPS.

In regard to the proposed sharp shooting or capture and euthanasia strategies, while AWI is unalterably opposed to such schemes being used within IDNL (or any of the national park for that matter), it is absolutely essential that the NPS allow only federal employees or specialists trained to perform such tasks to conduct such operations. As presently proposed the NPS is considering allowing “authorized agents” to conduct the operations. DEIS at 53, 60, 63. An “authorized agent” may include other agency personnel, tribal personnel, contractors, or skilled volunteers. DEIS at 52, footnote 3. Skilled volunteers would be identified, according to the DEIS, through a NPS-developed system. DEIS at 63. The broad definition of authorized agent is unacceptable as it could be interpreted to permit the NPS to allow private citizens, including sport hunters, to assist in the deer culling operations as long as they can merely demonstrate a proficiency in shooting a weapon. If private citizens, including hunters, are allowed to participate this represents a defacto authorization of sport hunting in IDNL which violates the park’s own enabling legislation, the NPS Organic Act, and other laws. Moreover, if this precedent is set it is but a small step toward officially opening, through Congressional action, IDNL to sport hunting which could then lead to other parks being open to hunting. This possible outcome, while entirely inconsistent with the NPS Organic Act, is also antithetical to the overwhelming public support for the national park system to be the one collection of federal lands where, with few exceptions, sport hunting is not permitted.

#### Consistency with the Purposes of the National Environmental Policy Act:

In yet another example of a bizarre interpretation of NEPA, the NPS assesses each of the alternatives seriously evaluated in the DEIS, including the preferred alternative (Alternative D) in respect to the fundamental standards that are the basis for the NEPA statute. This effort is literally like trying to force a square peg through a round hole since there are no requirements that NEPA alternatives be subject to such a comparative analysis with the basic tenets of NEPA nor does such a comparison make any sense

whatsoever. The basic tenets are just that, the fundamental principles underlying NEPA which establish overall guidance or direction for federal agencies when implementing NEPA. Using them as a measuring stick for alternatives simply doesn't fit or work. For example, the fifth tenet refers to a balance between population and resource use that would permit high standards of living and a wide sharing of life's amenities. The term population as used here refers to the human population, not a deer population. As such, comparing a deer management alternative to this tenet produces a rather comical result. Similarly, the third tenet refers to the need to attain the widest range of beneficial uses of the environment without degradation, risk of health or safety, or other undesirable and unintended consequences. Again, this tenet applies to beneficial uses of the environment for humans and, consequently, the reference to degradation, risk of health or safety, or other undesirable and unintended consequences pertain to those human uses of the environment not to how animals, like deer, use the landscape.

The NPS engaged in a similar type of analysis, though slightly different, in the Valley Forge National Historical Park DEIS suggesting that it is not simply IDNL that has been led down this strange path of comparative analysis that is meaningless and unnecessary. Instead of continuing to promote this misapplication of the foundations of NEPA, this entire section should be removed from the analysis and/or the NPS should identify a more meaningful way to assess the sufficiency of its alternatives. Admittedly, this interpretation of the NEPA is at best, misplaced, since in this author's review of hundreds of EIS and EAs throughout his career, he has only seen this type of comparison of the alternatives and the tenets of NEPA in two NEPA documents – the IDNL DEIS and the Valley Forge National Historical Park DEIS. This would, in and of itself, suggest that the NPS has elected to engage in an analysis that makes no sense and is unnecessary or it demonstrates to what lengths the NPS will go to diminish the value of any no-action or non-lethal management alternatives (Alternatives A and B, respectively in this case) in order to achieve its ultimate objective of killing deer.

Adequacy of information disclosed in the DEIS and sufficiency of analysis:

As previously stated one of the fundamental flaws in the DEIS is the lack of IDNL-specific data on deer numbers and density, vegetation baseline conditions, impacts of deer on vegetation, etc... Chapter 3 of the DEIS in which the affected environment has a number of examples where, because the NPS doesn't have park-specific data for the IDNL, it relies on data from other studies in other locations and ecosystems. See, e.g., DEIS at 99, 112, 123. The lack of high quality information upon which to base the evaluation of environmental impacts violates NEPA. If the data exist but is not, for whatever reason, disclosed this also violates NEPA. Moreover, if the data can be obtained by the NPS to inform its analysis but the NPS selects not to obtain the data because of the cost or time involved, that too is a violation of NEPA unless the agency complies with 40 CFR 1502.22(b)91-4). This option is not applicable here since the missing information is essential to the analysis and its cost of acquisition is not exorbitant.

In regard to the deer population within IDNL, much of the information provided is from studies conducted elsewhere and which the NPS believes would be applicable to deer within IDNL. Information on deer productivity, home range size, general ecology, and deer impacts to vegetation contained in the DEIS is nearly all based on studies elsewhere. See, e.g., DEIS at 112. Demonstrating the lack of



information about the IDNL deer, the NPS concedes that IDNL “has not conducted a home range study on white-tailed deer, no comprehensive census of the deer population has been conducted within all units of the IDNL, and that it intends to implement a herd health check program on IDNL (indicating that it hasn’t previously studied the park’s deer herd health). DEIS at 112, 113.

The IDNL-specific information that is provided is incomplete, old, and largely useless. The NPS reports that it has conducted infrared imaging and spotlight surveys on portions of IDNL over the last several years. Spotlight surveys have been conducted every year between 1991 and 2006 with the exception of 1994 in both the East and West units and that the data are being modeled using distance sampling methods. DEIS at 112. The NPS reports that, as of 2006, deer densities in the park range from about 50 deer per square mile to 150 deer per square mile. The NPS, however, beyond providing virtually no evaluation of the methodologies used and/or assessing the accuracy of the counts depending on any number of factors that can influence such counts, the NPS failed to disclose all of the spotlight count data (either in an appendix to the document or in table embedded into the text of the DEIS) collected over the years. The 2008 study they cite in regard to the spotlight survey analysis is an internal NPS report that has not been peer-reviewed and is not available in the published literature. The fact that the NPS did not disclose the spotlight count data in the DEIS suggests that, perhaps, the data either is deficient or it would provide those opposed to the deer management plan with additional arguments to use to reject the plan – particularly the possibility that the deer population is currently experiencing a downward trend in number and density. Such evidence, if indeed it were the case, would undermine the NPS argument for its deer killing plan.

In regard to infrared surveys, the NPS reports that such surveys were conducted annually in the East Unit between 1998 and 2002 but that they did not cover the entire unit in all years. The surveys estimated the deer population at an average of 70 deer per square miles within the East Unit deer management zone. DEIS at 112. Again, the NPS does not disclose the actual aerial survey data collected each year, where the surveys were flown, how many extrapolations were conducted, nor did it compare and contrast the aerial survey data with the spotlight count data for the corresponding years. This lack of disclosure raises serious suspicions about the data itself, what it says, and how it has been interpreted.

In regard to other wildlife species that inhabit the IDNL, there are a large number of mammals, birds, reptiles, amphibians, and fish involved. DEIS at 115. While the NPS concedes that some of these species are not adversely impacted by deer, it claims that many are. For example, the number of under-story nesting bird species decrease as deer densities increase, that there are distinct changes in bird abundance as a result of deer density, that a reduction in deer density changes the composition of forest bird populations, that deer compete with other mammal species for available resources, and that high deer numbers cause a reduction in ground cover that affects the ability of small mammals as well as ground-nesting or feeding birds to conceal themselves from predators. See e.g., DEIS at 123, 124. All of these claims as well as those on page 215, if supported with citations, rely on citations for studies conducted elsewhere. The NPS has failed to conduct a single study as best as can be determined to determine the abundance, density, range, and other biological/ecological characteristics of these other wildlife species on IDNL or to assess the actual impact of deer on other wildlife on the IDNL. Without

such data, neither the NPS nor the public can accurately assess such impacts and, indeed, the NPS evaluation of the environmental consequences of each alternative is entirely based on speculation or a “best guess” by the NPS. This provides yet another example of why this DEIS is premature and must be shelved which the NPS engages in a series of comprehensive studies to actually try to understand the biology and ecology of a large number of species on IDNL so that it can reliably and accurately assess the impacts of each alternative.

The DEIS includes a large amount of information on federally and state listed species. For the federally listed (threatened or endangered) species identified in the DEIS, only the Karner blue butterfly, piping plover, and Pitcher’s thistle are known to occur on IDNL, seasonally use IDNL, or are considered uncommon on IDNL, respectively. DEIS at 126, 127. Among the threats to the Karner blue butterfly on IDNL is urban encroachment and residential/commercial development resulting in habitat fragmentation, decreased patch size caused by some of the same impacts, and off-road vehicle impacts. DEIS at 181. For the Pitcher’s thistle the threats include habitat loss and fragmentation including as a result of development, sand mining, beach and dune stabilization projects and certain recreational activities. DEIS at 182. Finally, for the plover, habitat loss and alteration caused by industrial and commercial development, beach walking, kite-flying, fireworks, bonfires, horseback riding, and motorized vehicle use all represent substantial threats through disturbance of plovers. DEIS at 183. With the exception of potential deer impacts to the lupine habitat of the butterfly, deer are not identified as threats to the other two species referenced in this paragraph.

For state-listed species, the DEIS provides a lengthy table describing the species, its habitat, the type of IDNL habitat that it could occupy, its flowering period (for plants), its palatability to deer, and other information. See e.g., DEIS Table 29. While there are state-listed animal species that potentially occupy, permanently or seasonally, the IDNL, this analysis focuses on the state-listed plant species due to the sheer number of such species. It is important to note that this information was gleaned from the IDNR Division of Nature Preserves. While no independent review of this list (assuming it is even accessible to the public) was done, the DEIS claims that all of the state-listed plant species in the table are known to occur or may occur on IDNL. DEIS at 127. This is an important distinction since the NPS fails to disclose which state-listed plant species are, in fact, confirmed to occur on the IDNL versus which species may or may not occur on IDNL. The charts only indicate what type of communities that plant species would occupy if they occurred on the IDNL not that they, indeed, are found in those communities.

According to the NPS, 25 plant species have been extirpated from IDNL. DEIS at 179. These species are thought to be the victim of habitat degradation. A total of 90 plant species are believed to have been extirpated from the entire state of Indiana. DEIS at 180. The primary cause of this loss has, again, been habitat destruction. Other endangered plant species are in decline due to habitat modification. DEIS at 180. As the NPS concedes in the DEIS, the factors contributing to these declines and extirpations include increase in exotic species, interference of natural disturbance processes such as fire, human trampling of caused by overuse of an area for commercial, sporting or education purposes, illegal collection of both plants and animals, off-trail hiking/use by visitors, off-road vehicle use resulting in high amounts of wind-blown sand, beach erosion, and degradation of air quality. DEIS at 180, 181. What is missing from

this list is deer and the alleged impacts of deer on plant species suggesting that, while said impacts are not non-existent, there are other factors that are far more destructive of plants and their habitat.

Despite failing to provide data on what state-listed species actually occur on IDNL, their status on and off the IDNL (in terms of population size, production, site-specific threats), it is impossible to assess the impacts of each alternative on these species. Yet, the NPS has done so in Chapter 4 of the DEIS, confidently predicted that such rare and sensitive species will continue to be adversely impacted if lethal deer control is not implemented. DEIS at 224, 225. Without more data, such as that described above, it is impossible to make this determination unless sheer speculation is now considered an acceptable form of high quality analysis within the NPS and under NEPA.

For vegetation on IDNL, virtually no site-specific information is disclosed in the DEIS. The NPS claims that it has been monitoring vegetation growth within IDNL since 1997 using paired plots, but the data from those studies/surveys are not included in the DEIS. In its evaluation of Alternative A, however, the NPS concedes that “although the plots have shown an increase in the density of woody-stemmed plants and an increase in percent cover, they did not provide enough data to indicate that cover types were changing (increasing or decreasing) more rapidly in these areas versus the control areas.” DEIS at 193. This statement suggests that deer are not causing the level of impact that the NPS claims throughout the DEIS. The NPS claims that, based on results from its “monitoring data,” all three species (white baneberry, sweet cicely, and jack in the pulpit) show signs of deer browsing impact,” id., yet the actual data is not disclosed in the DEIS nor is it clear what “signs of deer browsing impact” means in regard to the extent, frequency, or severity of the alleged impact.

Despite this lack of data, the NPS confidentially claims that the no-action alternative, if selected, will result in adverse impacts to native plant abundance and diversity and increased opportunity for exotic species. Without proof through the disclosure of data from the IDNL, such claims are entirely speculative.

In addition to its analysis, albeit inadequate and largely unsubstantiated of the impacts of each of the alternatives, the NPS also includes, as required under NEPA, an analysis of the cumulative impact of each alternatives. This analysis, however, is woefully inadequate. The intent of such an analysis is to examine the impacts of the alternatives in light of the impacts of all past, present, and reasonably foreseeable future action regardless of the agency, state or federal, responsible for the action. Instead of engaging in such a comprehensive analysis to assess how the park’s vegetation, deer, other wildlife, etc..., would be impacted cumulatively by all such elements, the NPS, for the most parts, simply lists the past, present, and reasonably foreseeable future actions that may interact with each alternative. This deficiency represents a significant flaw in the analysis.

#### Conclusion:

Based on the foregoing information and analysis, the DEIS is wholly inadequate both from a scientific and legal perspective. Instead of engaging in a comprehensive analysis of the impacts of the action based on facts, the NPS has engaged in an analysis based on presumption, supposition, and “best guesses.” Such a shoddy effort is well below the standards of the NPS.

The deficiencies in the DEIS are indicative of an agency that is acting in great haste to finally initiate a project that it has likely wanted to start for many years only to be hamstrung by the NEPA planning process. As a consequence, instead of embracing the value of NEPA as a planning tool, the NPS saw it as an obstacle to a course of action that the NPS had long ago decided to pursue. Thus, in addition to the obvious bias within the NPS in favor of the deer slaughter, it had predetermined the outcome of this planning process and the crafted an analysis that achieves that outcome with virtually no site-specific scientific evidence or data.

The only way to resolve these inadequacies is for the NPS to, at a minimum, suspend the current planning process pending the acquisition of new data/evidence, the analysis of that data, the supplementation/amendment to the DEIS, and its republication for public comment. Preferably, however, the NPS will concede that the proposed massive deer slaughter program is not legally allowed under the NPS Organic Act and then craft a more enlightened and progressive management plan and environmental analysis that is based on protecting IDNL's deer not persecuting them.

Thank you in advance for considering this comment letter. Should you have any questions about this letter or if you would like to discuss AWI's perspective on the DEIS, please contact the author at (609) 334-1378 or via e-mail at [dj@awionline.org](mailto:dj@awionline.org). Please send any future correspondence on this matter to the author at Animal Welfare Institute, 3121-D Fire Road, PMB#327, Egg Harbor Township, NJ 08234.

Sincerely,

A handwritten signature in black ink, appearing to read "D.J. Schubert". The signature is written in a cursive, flowing style.

D.J. Schubert  
Wildlife Biologist