

STATE OF NEW YORK  
SUPREME COURT COUNTY OF ALBANY

WILDLIFE PRESERVATION COALITION OF  
EASTERN LONG ISLAND, by its president WENDY  
CHAMBERLIN, ANIMAL WELFARE INSTITUTE,  
HUNTERS FOR DEER, LLC, LONG ISLAND  
ORCHESTRATING FOR NATURE, THE EVELYN  
ALEXANDER WILDLIFE RESCUE CENTER, INC.,  
ISABELLE KANZ, BARBARA McADAM,  
PATRICK McBRIDE and MICHAEL TESSITORE,

Petitioners-Plaintiffs,

- against -

NEW YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION, JOE  
MARTENS, in his capacity as Commissioner of NEW  
YORK STATE DEPARTMENT OF  
ENVIRONMENTAL CONSERVATION, THE LONG  
ISLAND FARM BUREAU, THE VILLAGE OF  
NORTH HAVEN, and JOHN DOES,

Respondents-Defendants.

**AFFIDAVIT OF  
LAURA SIMON**

Index No.:

STATE OF CONNECTICUT )  
 ) ss:  
COUNTY OF NEW HAVEN )

Laura Simon being duly sworn, deposes and says:

1. My name is Laura Simon. I reside in Bethany, Connecticut. I make this affidavit based upon my own personal knowledge.

2. I submit this affidavit as an expert witness in support of Petitioners-Plaintiffs in the above-referenced action.

3. I graduated from Yale University in 1990 with a Masters of Environmental Management with a special focus on wildlife policy. I am presently employed as a Wildlife Ecologist with The Humane Society of the United States. I have been employed by HSUS since 2005. My job duties are focused on wildlife problem mitigation including deer-human conflict issues. I have operated a wildlife hotline for the past 18 years to provide technical support and advice to people, municipalities, and businesses who are confronting a wildlife problem. In addition, I provide assistance to communities, individuals, and other entities with the resolution of wildlife-human conflicts through problem assessment, consultation, training and educational workshops, legislative initiatives, advocacy and outreach, and creation of model policies.

4. Prior to my employment with HSUS, I was the Urban Wildlife Director for The Fund for Animals from 1995 to 2005. In addition, I worked as a Nuisance Wildlife Control Operator in the State of Connecticut from 1997 to 2011 and have served as the President of the Connecticut Wildlife Rehabilitators Association from 1994 to the present. I have served and continue to serve on a number of advisory committees including Reunite Wildlife, Inc. (2011 to present), the Westchester County Deer-Task-Force (2006-2008), the Governor's (Connecticut) Rabies Advisory Committee (1994-2000), the Nuisance Wildlife Control Program Advisory Committee (Hartford, Connecticut) (1997-1998), and the Marion Rosenthal Koch Foundation (1997-2000).

5. I have published a number of papers on wildlife-human conflicts, and given presentations on the subject at various national conferences and symposia. Some of the conferences where I have made presentations on urban wildlife issues include the Vertebrate Pest

Conference, Wildlife Society conference, International Wildlife Congress (New Zealand), International Symposium on Society and Resource Management, Northeast Fish and Wildlife Conference, Rabies in the Americas, and the International Symposium on Urban Wildlife Conservation. I am also familiar with much of the published literature on the subject including literature relevant to deer-human conflicts. In 2001, I authored a booklet entitled "Living with Deer" providing non-lethal and humane solutions to a variety of deer-related problems. In addition, as I am personally and professionally interested in deer ecology and management issues, I am familiar with much of the deer literature including studies related to population demographics, Lyme disease, immunocontraception/reproduction control, damage mitigation and population control strategies.

6. I am a recognized national expert on deer issues. In addition to serving on the Westchester County Deer Task Force, I have been an invited speaker at more than 25 deer advisory committees, boards of selectmen, wildlife commissions, and health department advisory committees to discuss deer problem management and Lyme disease issues. I have also served as invited expert for various public deer forums sponsored by municipalities seeking to mitigate deer conflicts. Some of the entities that have sought my expert input on deer related issues include the Northern Virginia Parks Authority, Nantucket Tick-Borne Diseases Committee (MA), and the Fairfield, Westport and Ridgefield (CT) Deer Task Forces and Deer Management Committees. Recently I helped to design a deer management policy for the City of Austin, Texas. I have also served as an invited lecturer for more than 20 university classes and Natural Resource School graduate guest lecturer programs where I have discussed topics including the challenges of deer management and practical remedies to address deer-human conflicts. Some of the universities where I have been invited to speak include Tufts University, University of Arizona, Yale

University, University of New Hampshire, University of Connecticut, University of Vermont, Horry-Georgetown Technical College (NC), and Teikyo Post University. I have also been accepted as an expert witness in two court cases including a deer management and hunter harassment case in Connecticut.

7. I have reviewed a number of documents relevant to the Long Island Farm Bureau ("LIFB") and U.S. Department of Agriculture – Wildlife Services ("USDA-WS") program deer culling project (hereafter "LIFB/USDA-WS Project" or "Project") and, therefore, am familiar with the intent and design of the Project. Specifically, the USDA-WS is deploying federal sharpshooters to lethally remove up to 1,000 deer this winter primarily from private lands within a number of towns and villages on eastern Long Island. The sharpshooters are using high-powered weapons with suppressors to kill deer eating at bait stations and will shoot from either elevated tree stands or from vehicles. The killing is being done primarily at night to ostensibly reduce impacts to local residents. Another option planned for removing deer is to capture them using nets, securing them by hand, and then shooting them in the head with a small caliber weapon. The dead deer may be butchered and the venison donated to local food banks. I understand that the Project has been implemented but I don't know how many deer have been killed to date nor when the Project will be terminated for the season. Based on correspondence from Martin Lowney (WS State Director) to the Animal Welfare Institute (Jan 2014) there is evidence that this program will continue in future years potentially with the goal of removing as many as 9,000 deer over at least three winters. The LIFB is providing the bulk of the funding to pay for the costs of the Project through a \$200,000 allocation of New York State taxpayer dollars from the New York State Legislature.

8. The stated purpose of the Project is delineated in a Cooperative Service Agreement between the LIFB and USDA-WS. This Agreement was finalized and signed in February 2014.

The purpose of the Project is:

“...to ... reduce white-tailed deer damage to agriculture and property and to reduce the risk of disease and parasites vectored by deer in the East End of Long Island (Towns of Shelter Island, Southampton, Southold, East Hampton, and Riverhead) and the Town of Brookhaven. This damage, and disease and parasite risk reduction will be achieved by reducing the deer population within the local farming community and residential areas within these Townships.”

9. Attachment A to the Cooperative Service Agreement is identified as the “Work Plan” and provides the ostensible scientific justification for the Project. This justification, however, is shockingly incomplete and largely based on anecdotal evidence, unsupported facts, arbitrary use of statistics, and a woeful lack of any substantive analysis. I have reviewed this justification and provide the following expert analysis of the information upon which the Project is based. My analysis is also based on additional information that I have read relevant to the Project, research I have done on the subject, information in my files, and my personal knowledge.

10. As an initial matter, the Work Plan includes a total of nine citations in support of some of the statements used to justify the Project. Of these nine citations only three were published in peer-reviewed journals. The remaining citations are either non peer-reviewed reports, newspaper articles, or a press release. Of the three citations from the peer-reviewed literature, none involve studies of deer or Lyme disease on eastern Long Island. The lack of a more substantive review of the scientific literature used as a justification for this Project is

troubling. It reflects a lack of effort to compile credible scientific information, preferably site-specific studies, needed to justify the killing of such large numbers of deer and suggests that the analysis of this project may have been prepared in great haste. Given the scope of the project (i.e., lethally removing up to 1,000 deer) and the inherent public controversy associated with any lethal deer control program of any size, credible scientific studies must be used when evaluating the need to remove large numbers of deer and in order to demonstrate the purported need for the project, to properly evaluate alternatives to lethal control, and to provide the public with a more substantive analysis of any science that supports the decision to move forward with a project like this.

11. Of particular concern is the reliance on the population estimate of 30,000 deer on eastern Long Island. The Work Plan provides no citation in support of this estimate. In a January 31, 2014 letter from Martin Lowney from the USDA-WS to the Animal Welfare Institute, this estimate was described as an estimate provided by the New York State Department of Environmental Conservation ("NYSDEC"). Yet, a comprehensive search of the NYSDEC website and the published literature failed to find any scientific support for this estimate. In other words, it is not clear how this estimate was calculated, whether it was based on any credible deer population surveys, or if it is an entirely arbitrary estimate that may substantially overestimate the number of deer on eastern Long Island. The Verret (2006) study of deer in the Town of East Hampton, New York provides information on estimated deer densities based on a distance sampling methodology but the results do not support an East End population size of 30,000 deer nor does Verret even provide an estimate for the East End deer population. Similarly, though aerial surveys using forward looking infrared technologies have recently been conducted in the Town of East Hampton and Village of North Haven, those results also do not

support the 30,000 estimate. I am not aware of any surveys, aerial or ground based, conducted throughout eastern Long Island and could find no evidence of such surveys in the peer-reviewed literature or in any articles published in newspaper or other secondary sources.

12. While a precise count of deer is impossible, obtaining a credible estimate of deer using sound scientific sampling methodologies is essential before embarking on a culling operation that intends to remove up to 1,000 deer this winter and potentially 9,000 deer (as stated in the USDA-WS Work Plan) over the course of several winters. Initiating such a cull without a credible estimate of the deer population size, deer distribution, and how deer concentrations or densities vary across the landscape is biologically and ecologically reckless and could contribute to dramatic impacts, adverse and beneficial, to the environment including the human environment (i.e., the values that humans place on deer, benefits and consequences accrued from deer presence, value of watchable wildlife, aesthetic and ecological value of deer to humans), depending on where culling is conducted and how many deer are removed from local areas.

13. Deer occur at different densities throughout eastern Long Island. These variable densities depend on, among other factors, habitat quantity and quality, food type and availability, land use and management practices, availability of a mosaic of habitat types, and protection afforded deer in each habitat type. While the Project will not exterminate deer from eastern Long Island, it could substantially reduce local deer populations, potentially harming people who live in those areas who hunt them and those who enjoy the opportunity to observe them in their communities and in nature.

14. While reducing the deer population could provide a reduction in deer damage to agricultural crops and reduce the incidence of deer-vehicle collisions, such relief will only be temporary as deer will rapidly recolonize the area. Furthermore, deer productivity will be

maximized (ie more triplets born instead of twins) since more food will be available to the surviving and re-colonizing deer. As a result, whatever results are obtained from the culling operation, they will be short-lived. Only by continually engaging in such controversial and expensive culling operations might an artificially reduced deer population be sustained.

However, any lethal control program must not only significantly reduce the deer herd but also sustain enough pressure over time to keep the population at a low level and prevent this reproductive bounce-back, as well as prevent deer from the surrounding area from wandering in, all of which usually poses an insurmountable challenge. It is this rebound effect of any hunting or culling operation that makes these population control methodologies ineffective as long-term population control strategies, unless the intent is to utilize lethal methods indefinitely and find a way to intensify and sustain enough hunting pressure to keep the deer at unnaturally low levels.

15. While the 30,000 deer estimate appears to be arbitrary, the Work Plan indicates that the NYSDEC claims that this is three times the biological carrying capacity of the habitat. This claim is erroneous because the biological carrying capacity is the number of deer that a given habitat can support. The deer can't be 3 times beyond a level that supports them without severe health impacts and die-offs. In other words, unless deer are starving and demonstrating a very low reproductive rate and high mortality rate, then they have not exceeded their biological carrying capacity. In this case, either the 30,000 estimate is a significant overestimate -- or that eastern Long Island can sustain a much larger population of deer than claimed by the NYSDEC. Eastern Long Island, like most areas that combine both rural and urban/suburban habitat, provide ideal habitat for deer. With the mosaic of habitat types -- influenced significantly by agricultural operations, land management practices, and development -- it's obvious that eastern Long Island can sustain a large number of deer.



16. Deer *can* exceed the biological carrying capacity of their habitat. However, the suggestion that they can exceed that capacity “by three times” is inconsistent with basic ecological principles. These principles, which are well understood by the NYSDEC and USDA-WS, demonstrate that as the deer population increases, habitat quality declines, thereby reducing available food supplies. This results in a decline in the size and condition of deer, an increase in natural mortality rates, and a decrease in productivity rates. In other words, as a deer population increases, its growth rate decreases relative to a diminished food supply.

17. The fact that eastern Long Island contains a mosaic of habitat types including suburban lands allows the deer population to reach a size in excess of what would likely exist if eastern Long Island had not been modified by human presence (i.e., the biological carrying capacity is higher than it would be if the lands were in an entirely natural state) but this does not change the ecological reality that triggers a reduction in the population’s growth rate as the overall population nears and exceeds the biological carrying capacity of the land. I would also note that the biological carrying capacity of any habitat is dynamic as it can change rather rapidly in response to both natural and anthropogenic influences.

18. The Work Plan alleges that the NYSDEC claims that a deer density of 10-15 deer per square mile is “appropriate” for eastern Long Island. This claim is not supported by any scientific evidence in the Work Plan. In my experience, this density range is often referred to by wildlife management agencies and wildlife managers as the ideal density for deer. The origins of this ideal deer density range are not entirely clear but this “one-size-fits-all” ideal deer density range is not site-specific and fails to consider the attributes of each area and, therefore, should be considered no more than a generic recommendation. The “appropriate” or sustainable deer

density range for eastern Long Island is likely higher for the reasons articulated above. Indeed, Verret (2006) referred to a 20-40 deer per square mile density range for the Eastern United States which is significantly higher than the 10-15 deer per square mile range supported by the NYSDEC. Admittedly, the 20-40 range is applicable to the entire Eastern United States so it too lacks any site specificity but it demonstrates that there are different density ranges that are considered desirable for achieving harmony between human uses of the land and deer.

19. Similarly, I don't know what the best estimate is for the size of the deer population on eastern Long Island. There is evidence to suggest that it is lower than 30,000. For instance, in the NYSDEC 2012-2016 Deer Management Plan, a chart is included that provides data on bow hunter indices of deer (a method used by the NYSDEC to monitor changes to the deer population size). The data in that chart indicates that the bow hunter sighting indices of deer declined from approximately 800 deer per 1,000 hours to slightly more than 600 deer per 1,000 hours between 2001 and 2010. While this data reflects the statewide bow hunter indices, data specific to bow hunter indices for Long Island were not available. Nevertheless, this data could suggest that the deer population in New York, including on Long Island, is decreasing in size.

20. The Work Plan suggests that the deer on eastern Long Island are adversely impacting local agriculture as a result of deer impacts to a variety of agricultural products including vegetables, fruits, ornamental shrubs/trees, hay and other products. Unfortunately, no recent estimates of crop damage attributable to deer were included in the Work Plan and, through my own independent research; I was unable to find such data. The data cited in the work plan suggests that eastern Long Island farmers lost 1.75 million dollars' worth of crop value to deer in 2004 which increased to 5 million dollars of losses in 2008. The latter estimate was contained in a press release and, therefore, without the underlying data this estimate is impossible to evaluate.

21. What is relevant, however, is that according to the 2007 Census of Agricultural country profile for Suffolk County farmers earned \$242,933,000 in revenue meaning that, even if they incurred 5 million dollars in losses attributable to deer, this is merely 2 percent of the total revenue. Furthermore, according to New York crop-specific fact sheets prepared by Cornell University (available at <http://pmep.cce.cornell.edu/fqpa/crop-profiles/index.html>), New York crops are lost due to a number of factors, particularly insects and disease. However, with the exception of berries, not a single crop is identified as being significantly impacted by deer. Furthermore, in a 2013 report entitled "The State of the Suffolk County Agriculture Industry," farmers ranked the "Prevalence of Pests (Deer, Insects, Rodents)" as the seventh greatest concern. This is not to suggest that deer don't impact agricultural crops in New York but to instead suggest that deer impacts are unlikely to be as significant as other threats to agricultural crop production.

22. Where deer are known to impact crop production, there are non-lethal and humane alternatives available to remedy, prevent, or mitigate such losses. Deer proof fencing (of which a variety of designs have proven to be effective) can be constructed to prevent or minimize deer access to crops. Indeed, based on my research, over 50 miles of such fencing has been installed on eastern Long Island through an allocation of nearly 1 million dollars from the New York State legislature for fence construction to protect eastern Long Island farms from deer depredations.

23. Where deer are known to impact homeowner ornamentals, there are non-lethal, humane and effective alternatives for resolving these types of problems. Rather than try to control deer numbers, a better approach is to focus on controlling impacts in a site specific manner. For example, as long as residents grow tulips and roses, they're likely to experience

browsing impacts even if the deer population is very low. However, strategic and site-specific use of alternative flower choices, effective repellents or temporary barriers can remedy browse damage problems for property owners.

24. The Work Plan also identifies deer-vehicle accidents as justification for the Project. Deer-vehicle accidents are an unfortunate reality of living with deer. In my study of deer-vehicle accidents, most occur at dusk, dawn, or over-night and there is a spike in such accidents in the fall when deer are in rut and during fall deer hunting seasons. While there are lots of statistics on deer-vehicle accidents, some reliable and some not, I have been unable to locate specific deer-vehicle accident statistics for eastern Long Island except for the reference to the increase in such accidents for the Town of East Hampton contained in the Work Plan.

25. Though it is often claimed that an increase in deer-vehicle collisions is proof of an increase in the deer population, this is not necessarily true. For example, a published study done by scientists with the National Zoological Park and VA Department of Game and Inland Fisheries (McShea et al, 2008) used the Virginia Department of Transportation's deer-car collision figures to assess hunting pressure, deer density, amount of forest and housing development, presence of crops and corridors and road metrics for 228 road segments (each 250 miles in length) within the county to determine which factors were correlated with deer-vehicle collisions. The study's authors found no evidence that deer density or deer harvest determined the frequency of deer car collisions in Clarke County. The study underscores the complexity of deer-related problems and the need to make sure the remedy actually addresses the problem. A number of factors can influence the rate of deer-vehicle accidents including, but not limited to, deer population size and density, deer distribution and movement patterns, the number of vehicles, changes in traffic volume, road density per square mile, time of year, time of day,

vehicle speed, and habitat and road management practices (e.g., use of salt to treat roads in preparation for inclement winter weather). All of these variables influence the likelihood of deer-vehicle accidents. As Verret (2006) found, drivers in the Town of East Hampton frequently exceeded the posted speed limit by 20-30 miles per hour and drove past deer on the side of roads without demonstrating any caution. Similarly, where roadside vegetation is dense, the likelihood of deer-vehicle accidents is higher since such areas may be both an ideal location for deer to cross road surfaces and since the presence of vegetation prevents drivers from seeing deer in sufficient time to avoid potential collisions.

26. Solutions for lowering the accident rate should begin with collecting information on the number and location of deer-car collisions, and assessing what habitat and road features may be contributing to the accident rate and "hotspots." Solutions should be tailored to particular high-risk sites, and can include lowered (and enforced) speed limits, removal of visual barriers (such as shrubs and other vegetation which may block driver sight lines), diversion fencing to shift deer movements in certain high-risk areas, the use of motion-activated warning devices which alert drivers and deer to the oncoming presence of each other, road salt substitutes, and driver education campaigns. These alternatives are most effective if high-risk deer-vehicle accident areas can be identified through the ongoing collection of deer-vehicle accident data. For example, the City of Rochester Hills, Michigan, created a highly successful and non-lethal program to reduce deer-car collisions. The city combined highly visible deer crossing signs at accident hot spots along with a much publicized "Don't Veer for Deer" educational campaign. The result was a 25% decline in deer-vehicle collisions despite a 34% increase in deer numbers over several years.

27. The Work Plan also cites various diseases carried by ticks as justification for the

Project. The threat of Lyme disease is a common refrain used to justify deer culling projects. Lyme disease certainly is a serious concern, but scores of scientific papers, conferences and a recent study by the National Academy of Sciences underscore the complexity of this disease, and how human risk from this disease is affected more by populations of small rodents (white footed mice) and oak mast growing conditions than by deer.

28. The Lyme disease-causing tick (*Ixodes scapularis*) is hosted by over 40 bird species, almost all mammals and even lizards. Mice and small rodents are primary hosts for the immature stages of the tick which are the most infectious to people. Songbirds play a key role in bringing ticks to new areas. The bottom line is that it's impossible to stop a multi-host disease by killing some members of just one host. Efforts to control Lyme disease by hunting repeatedly fail, as reported in the scientific literature, because even when a high proportion of deer are taken out, there are still enough ticks left to repopulate. Ticks will also switch to alternative hosts when their preferred host is unavailable, or congregate in higher numbers on any remaining deer. The few places where killing programs have successfully reduced ticks have been on small islands, where deer could be exterminated or reduced to near-elimination numbers. The Centers for Disease Control and other national health authorities don't recommend hunting as a way to reduce human risk of Lyme disease for the simple reason that it doesn't work to control the disease.

29. There are a variety of strategies that can be followed to reduce the risk of Lyme disease. Some of the best ways to control human Lyme disease involve doing a combination of the following: checking oneself and family members for ticks after being outdoors, taking precautions like wearing light-colored clothing, tucking in sleeves and socks, using tick-repelling products on skin and insecticidal sprays on properties, doing habitat alteration to reduce tick and

tick-host habitat, and consulting a doctor immediately when signs of Lyme disease or the characteristic rash occur. The New York State Department of Health recommends these and other strategies to residents in its fact sheet on ticks and Lyme disease.

30. In addition, there are acaricide (chemical substances which target ticks) application systems - commonly referred to as 4-poster systems - that can be installed outdoors that greatly reduce tick density on deer. The 4-Poster is a device that *uses the deer* to kill ticks. This device has been tested by the USDA in a 5 state, 7 year research program and has proven extremely effective in reducing tick numbers. It contains a corn bait, which attracts deer, and when they eat the corn, a chemical (10% permethrin) is applied to their necks and shoulders which kills over 95% of the adult ticks. Such systems have been installed on eastern Long Island including in Shelter Island. Cornell University also recently completed a substantive study of these 4-poster systems. Overall, the human risk of Lyme disease won't be lessened by reducing deer numbers, and it's disingenuous to even suggest so.

31. Finally, the Work Plan indicates that the Project is justified in order to reduce deer impacts to Forests and natural vegetation. In support of this claim the Work Plan cites to a 2013 report by Thomas Radwinski who may work for the U.S. Forest Service in New Hampshire. Unfortunately, despite an extensive search of the internet, including the U.S. Forest Service website, I was unable to locate the paper which, I would note, appears to be limited to the Town of Southold and was not published in the peer-reviewed literature. While I am unable to critique the Radwinski paper, it is commonplace for deer impacts in natural areas to be used to justify deer culls. Unfortunately, forest and vegetation ecology is complex with a number of variables affecting vegetation production, composition, abundance, and health.

32. Deer are considered by some experts, including me, as keystone herbivores in

the habitats where they exist in that they can and do modify the structure of the habitat by affecting forest regeneration and changing the vertical structure of forest habitat. Such impacts are rarely consistent across a landscape but, rather, occur in patches of habitat actually creating a collection of altered habitat that may benefit some species while being detrimental to others.

33. Despite the Project's assertion of generalized deer impacts to biodiversity, I am unaware of any credible data documenting a reduction in the biodiversity of eastern Long Island. In some cases, species assemblages may have changed directly or indirectly due to deer impacts to natural habitats, but this does not mean that there has been a reduction in biodiversity. Moreover, there are a host of other variables that may influence vegetation abundance, composition, health, and production. These influences run the gamut from acid rain, insect damage, disease, development, pollution, loss of soil fertility, drought, invasive and other competing plant species, parasitic organisms, and landscape fragmentation, among other factors.

34. While it is easy to point the finger at deer and blame them for our forest regeneration woes, the reality is that ecosystem issues are fraught with complexity, and also subject to human aesthetic preferences which may or may not be grounded in any sort of biological reality. For example, people may *want to see* more biodiversity or certain flowers in areas because they were seen there in the past. Yet nature is not static. A condition in which a forest floor was carpeted with wild flowers can rapidly transition into another state as a result of forest succession. Certain plant species are shaded out as trees mature and the forest canopy closes. Later successional stages are, by their very nature, less diverse.

35. Deer undeniably have a significant impact on Long Island forests. However, single-species management has never been a viable way to manage a complex, multi-faceted problem. By intensively managing one component of a forest, the result may be unforeseen



impacts on other components. There simply has not been enough time since the return of deer and forests both to greater abundance than in the past for us to understand (and properly plan for how to influence if necessary) the complex ecological associations involved.

36. The impact of deer on exotic and invasive species is another complex issue. Deer appear to control the spread of certain invasive plant species while helping to proliferate others. How ecological processes are affected by deer browsing is not as simple as what meets the eye.

37. There are alternatives to humanely address such impacts if it is deemed necessary to mitigate or remedy such impacts. Temporary or permanent fencing, for example, can be used to protect particular habitat types or rare species from deer browsing.

38. In addition, more broadly, there are technologies that can be used in a smaller scale way to reduce deer population size over time by limiting reproduction. Immunocontraception technologies have been successfully used to stabilize and reduce white-tailed deer populations, including on Fire Island National Seashore in New York, Fripp Island in South Carolina, and The National Institute of Standards and Technology in Gaithersburg, Maryland. On Fripp Island in South Carolina, the deer population was decrease nearly 60 % in just 5 years time. A field project using immunocontraception on a wild non-island deer population in Hastings, New York was recently initiated. Surgical sterilization of deer is becoming a more popular management option with experimental efforts undertaken in Fairfax City, Virginia; San Jose, California; Baltimore County, Maryland and at Cornell University. These experimental programs are so new that the results have not yet been published but, according to various anecdotal reports, the procedures used to trap, sterilize, and return the deer to their natural habitat have worked well with little to no deer mortality and, with the

involvement of volunteer veterinarians, veterinary technicians, and private citizens, the costs of the procedure per deer has been substantially reduced.

39. Due to the urgency of the legal action for which I am providing this affidavit, the issues that I have addressed in this affidavit are just some of the issues that the NYSDEC and/or USDA-WS should have addressed in a comprehensive review of the environmental impacts of the Project.

40. I am familiar with both the National Environmental Policy Act and the New York State Environmental Quality Review Act. I have evaluated a number of draft Environmental Assessment and Environmental Impact Statements prepared pursuant to NEPA and have submitted meaningful substantive comments accordingly. I believe these laws are important in that they compel federal and state agencies to disclose and analyze the environmental impacts of their proposed projects or actions before implementation. Such analyses, if subject to public review, provide the public, including scientists, with the opportunity to not only understand the basis for an agency's proposal, but to actively participate in the decision-making process by providing meaningful and substantive comment for consideration by the agencies. Had those laws been complied with in this case, the public would be more informed about the alleged justifications for the cull, the agencies would be compelled to use the best available scientific evidence to substantiate the need for the Project and would have carefully reviewed all alternatives, and the public would have had an opportunity to participate in the process. While this may not have reduced the controversy inherent to such lethal deer culling projects, it would have provided the public, including scientists, with an opportunity to express their opinions, to present their evidence, to critique the agency's analysis, and to believe that their concerns are considered by the agencies before any final decision was rendered. I also

believe that an objective evaluation of the environmental impact of the project and thorough review of alternative strategies may well have resulted in a very different, more comprehensive and publicly accepted outcome.

*Laura Simon*

Laura Simon

Sworn to before me  
this 5 day of March, 2014

*[Signature]*  
Notary Public



**My Commission Expires  
August 31, 2018**

STATE OF CONNECTICUT)  
) ss:  
COUNTY OF NEW HAVEN)

On the 5 day of March in the year 2014 before me, the undersigned, a notary public in and for said state, personally appeared Laura Simon, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual(s) acted, executed the instrument, and that such individual made such appearance before me the undersigned in the County of New Haven and the State of Connecticut.