White-tailed Deer Management Plan for Valley Forge National Historical Park: Frequently Asked Questions

What is the problem with deer in the park?

Browsing of tree and shrub seedlings by an increasing deer population over the last two decades has prevented the ability of native forests to grow and mature. In a self-sustaining forest of this age (about 80 years) you should see a mix of tree seedlings, sapling trees, young and mature trees - a range of ages and sizes. You would see an abundant and diverse herbaceous (or non-woody) plant layer, including a variety of ferns and wildflowers. You would see a dense understory of native shrubs. This layer of the forest, often called the forest understory, provides important habitat for a variety of animals. At Valley Forge, however, this vital mix of plants that makes up the forest understory is missing and the forests are in trouble. Deer now are so dominant in the environment that there is little or no habitat for a whole range of wildlife species that depend on the understory for survival.

How many deer are in the park?

In 2009, the deer population was estimated to be 241 deer per square mile (1,277 individual deer in the park). The number of deer in the park has steadily increased since the mid-1980s when the population size was estimated to be 31 to 35 deer per square mile (165 to 185 individual deer in the park). In 2011, the deer population is estimated to be 108 deer per square mile (751 individual deer in the park) after the first year of lethal reduction actions.

What does the NPS think is the 'right' number of deer?

Plan success is not measured by the number of deer but on the success of forest regeneration. Therefore, the "right" number of deer will be determined based on the ability of forest to regenerate. The initial target deer density has been identified as 31 to 35 deer/square mile (165 to 185 individuals). This is the number of deer that were present in the park in 1983-1986 when the health of the park plant community was described as "excellent." Other agencies and researchers recommend a density ranging from 10 to 40 deer per square mile to ensure forest regeneration. The target deer density for the park may change (up or down) based on the results of vegetation monitoring in park forests.

When did the NPS begin development of the plan and has the public been involved in the decision-making process?

Many public agencies, federal, state, and local governments, nonprofit organizations, institutions, and individual citizens have an interest in deer management at Valley Forge NHP. Reaching out to these interested parties for their ideas and expertise and listening to their concerns was an important step in the development of the plan. A combination of activities, including internal workshops, four public meetings, a project web-site, brochure, and over 90 briefings to civic organizations, local elected officials, and others helped the NPS gain important guidance in developing alternatives for the deer management plan.

A Notice of Intent to prepare a White-tailed Deer Management Plan/Environmental Impact Statement (EIS) was published in the *Federal Register* on September 7, 2006, initiating a 90-day public scoping period between September 7, 2006 and December 8, 2006. Two public scoping meetings were held on November 8 and 9, 2006. A total of 365 public comments were received during the scoping period.

These comments were taken into consideration during identification and development of the alternatives that then were presented in the Draft plan/EIS.

The Draft plan/EIS, containing four alternatives for management, was available for a 60-day public and agency review from December 19, 2008 through February 17, 2009. Two public meetings to present the plan and obtain comments were held on January 14 and 15, 2009. A total of 3,884 public comments were received on the Draft plan/EIS. Each comment was carefully evaluated and changes to the plan were made, if appropriate. Changes to the Draft plan/EIS as a result of public comment comprised factual updates to baseline data and clarifications added to the text. Appendix E: Review of White-tailed Deer Reproductive Control, was substantially updated to more accurately reflect the current state of the science and comments received through peer review. No substantive changes were made to the preferred alternative or other alternatives evaluated. A summary of public comments and NPS responses is contained in Appendix F of the Final plan/EIS.

What is the purpose of the plan?

The purpose of the plan/EIS is to provide an effective deer management strategy that supports long-term protection, preservation, and restoration of native vegetation, wildlife, and other natural and cultural resources in the park. The secondary purpose of this plan/EIS is to provide a chronic wasting disease (CWD) response strategy that is fully integrated with deer management and that will reduce the probability of occurrence, promote early detection, and reduce the probability of spread of CWD.

Has the NPS selected a deer management alternative yet and is the decision now final?

Yes, the NPS has selected a final deer management alternative and the decision is final. The Record of Decision documents NPS approval of the plan, selects the alternative to be implemented, and sets forth stipulations required for implementation. It was signed by the NPS Northeast Regional Director on October 1, 2009.

The NPS selected Alternative D, Combined Lethal and Nonlethal Actions, which was identified as the NPS preferred alternative in the Final plan/EIS

What management actions are included in the selected alternative?

The selected alternative continues current park deer management actions including vegetation and deer population monitoring, maintenance of small fenced areas, roadkill removal, public education, coordination with the Pennsylvania Game Commission (PGC), and CWD monitoring and response. In addition, the selected alternative incorporates lethal and nonlethal actions to quickly reduce and then maintain the deer population at a certain level in the park that protects native plant communities and promotes forest regeneration and habitat.

Initially, the selected alternative will use lethal reduction via sharpshooting and capture/euthanasia to quickly reduce the deer population and achieve the initial deer density goal. The NPS anticipates that this portion of the white-tailed deer management plan will take up to four years. When an acceptable reproductive control agent becomes available, maintenance of population levels will be conducted via reproductive control. Until an acceptable and effective reproductive control agent becomes available, however, population maintenance will be conducted using lethal methods.

Currently CWD does not occur in the park. If a confirmed case of CWD were detected within five miles of the park boundary or the park fell within a state-established CWD containment zone, however, then lethal reduction actions, if already being implemented, will be accelerated to achieve the target deer density more quickly. If use of a reproductive control agent is already being implemented, then the park will return to lethal removal actions. Lethal removal actions will continue until CWD monitoring,

conducted for a period of time consistent with current knowledge of the environmental persistence of CWD infectious agents, reveals no additional CWD-positive deer within the park. At that time, if an appropriate reproductive control agent is available, the park will reinstitute reproductive control methods for population maintenance. Additionally, during the CWD response, a one-time population reduction action could be implemented to achieve a deer density of not fewer than 10 deer per square mile. This action will be based on the success of state agencies in lowering deer densities in areas surrounding the park for the purposes of disease management.

How did the NPS determine the level of adequate tree regeneration?

Adequate regeneration is considered to be reached when 70% of monitoring plots exhibit the equivalent of 8,079 tree seedlings per acre. This figure was adopted based on the Pennsylvania Regeneration Study being conducted by the U.S. Forest Service and PA Department of Conservation and Natural Resources. This figure is similar to that adopted across Pennsylvania to ensure adequate forest regeneration.

Why is chronic wasting disease (CWD) included as part of the deer management plan?

A recent risk assessment for CWD revealed that the park is at high risk for occurrence. This is because the disease, previously believed to be isolated in the west and mid-western regions of the U.S., jumped to West Virginia and New York in 2005. It has been detected approximately 200 miles from the park boundary. CWD is highly likely to occur where there are dense populations of deer. Although CWD doesn't occur yet in Pennsylvania or the park, the NPS has decided to be proactive in addressing this issue.

When will sharpshooting occur in the park?

All deer management actions will take place between November and March. The park will conduct the second year of the lethal reduction phase of the plan/EIS beginning from November 2011 through March 2012.

How will the NPS make sure that the public is safe? Who will conduct the action?

The safety of park visitors, park neighbors, park staff, motorists, and others is our top priority. Extensive safety measures are in place to ensure a safe, humane, and successful operation. One of the primary elements of ensuring operational and public safety is to use highly qualified and experienced marksmen that are familiar with the park and with conducting lethal activities in a highly suburbanized environment. Therefore, the NPS will work with professional biologists from the United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services (USDA-WS). USDA-WS has a long history of conducting safe and effective actions to reduce wildlife populations, including the reduction of deer populations at multiple locations in Greater Philadelphia Area and other populated areas nationwide. Additional safety measures that will be employed include:

- Lethal reduction activities will be conducted during periods of low visitation and while the park is closed (after dark);
- Activities involving firearms will be conducted in compliance with all federal firearm laws administered by the Bureau of Alcohol, Tobacco, Firearms, and Explosives;
- Bait may be used to attract deer to safe removal locations that will be approved by NPS personnel and located away from public use areas;
- Lethal reduction activities will not take place within established safety zones along the park boundary, open roadways and occupied buildings;
- Shooting actions will be conducted from an elevated position (e.g. tree stand);
- Shooting actions will utilize specialized ammunition that is safe for use in urban areas (minimizes travel range of projectile) and the environment (non-lead);

• NPS personnel will patrol the park during removal actions to ensure compliance with park closures and public safety measures and accompany USDA-WS teams in the field.

Will the NPS provide more specific information on when these activities are taking place?

Public safety is our top priority and in order to make this action as safe as possible for park visitors, neighbors, staff, and motorists we will share specific information on reduction activities with local law enforcement and other state and local officials to ensure coordination. Details of implementation (e.g. what, when, and where actions on the ground will take place) will not be provided to the public. We are working closely with local and state officials to be sure we have a comprehensive communications strategy that ensures public safety.

Has the lawsuit filed against the NPS been resolved?

In November 2009, several groups filed a complaint in Federal District Court challenging the Record of Decision for the Valley Forge NHP White-Tailed Deer Management Plan / Environmental Impact Statement, asserting that in its planning process and decision the NPS had failed to comply with various federal statutes and regulations. On October 27, 2010, US District Judge Mitchell Goldberg issued a decision upholding the Record of Decision and stating that not only was the NPS decision neither arbitrary nor capricious but that, in fact it "exemplifies a fully informed decision." Injunctions filed in November 2010 were also denied by the court. Judge Goldberg's decision was upheld by the United States Court of Appeals on June 27, 2011.

Will the meat be donated?

As long as CWD is at least 60 miles away from the park, meat will be donated to organizations such as local food banks, consistent with guidance from the NPS Office of Public Health. If CWD were confirmed within 60 miles of the park boundary or the park fell within a state-established CWD containment zone, then disposal would follow guidelines provided in the PA Chronic Wasting Disease Management Plan. CWD-negative deer would be disposed of via landfill. CWD-positive deer would be disposed of via landfill, incineration, or digestion. The NPS cannot sell the meat. The disposition of any antlers and hides will be determined by the PGC.

What is the cost of implementing the selected alternative?

The estimated cost for this action in years 1-4, during population reduction, ranges from $150,000 to $180,000 annually, depending on how close CWD is to the park. Estimated cost per year for population maintenance (implementation of reproductive control) ranges from $108,363 to $194,517 annually.

There are many factors that affect forest regeneration - why is the NPS focusing on deer?

Long-term monitoring of fenced and unfenced areas in park forests clearly demonstrates that high deer density is the dominant force in the park limiting the growth and maturation of the park's forests, due to browsing of tree and shrub seedlings. Young trees and shrubs grow to only a few inches tall before being eaten by deer and other herbivores.

The bigger picture includes the need for increased management of non-native invasive plants, which already takes place in the park. Implementation of new silvicultural practices and restoration of the forests will take place when the browsing pressure is reduced to a point at which forests can regenerate.

Why not allow local hunters to reduce the deer population for free?

Under federal law, hunting isn't allowed at a national park unless it was specifically authorized in a park's enabling (or subsequent) legislation. The law establishing Valley Forge as a unit of the national park system was passed in 1976 and does not authorize hunting. Due to the number of comments from the public on this topic, public hunting was evaluated during the development of the plan, based on factors of cost, safety, efficiency, and ability to achieve management objectives. The cost of implementation of a public hunting option was similar to sharpshooting. Sharpshooting, however, provides significant advantages over a controlled public hunt in regard to public safety, efficiency, and the ability to achieve the target deer density.

Did you consider using a reproductive control agent?

The NPS fully evaluated the advantages, disadvantages, effectiveness, and costs of using reproductive control as part of two deer management alternatives. These were Alternative B (Combined Non-lethal Actions) and Alternative D (Combined Lethal and Non-lethal Actions), which is the alternative selected. Under the selected alternative, if an acceptable chemical reproductive control agent is available, reproductive control would be implemented once the initial target deer density has been achieved. If an acceptable reproductive control agent is not available or is ineffective, the park would return to sharpshooting to maintain the deer population at the target density.

Appendix E, in the Final plan/EIS, provides a comprehensive overview of the status of the science on reproductive control. At the request of animal preservation groups and others, this appendix was reviewed by experts in the field of reproductive science and the NPS revised and updated information on reproductive control in the Final plan/EIS based on expert comments. Expert review and comment was provided by Dr. Allen Rutberg and Dr. Jay Kirkpatrick.

Who decides that a reproductive control agent is "acceptable" - is it NPS or the Humane Society?

The NPS established the criteria for an acceptable reproductive control agent and makes this determination in consultation with technical experts. Our criteria for an acceptable reproductive control agent are that: (1) it is 85% to 100% effective for 3-5 years; (2) it can be delivered without having to handle the deer (remotely); (3) It would not leave hormonal residue in the meat, which would prevent the meat from being used for human consumption; and (4) it would not cause significant changes in deer behavior. The Humane Society of the United States was asked to comment on whether an agent that meets these criteria was expected to be available in the near future. Their representative, Dr. Allen Rutberg, indicated one would be available within at least the next 15 years.

Why isn't native PZP, developed by Dr. Jay Kirkpatrick, considered an acceptable reproductive control agent?

PZP is not considered an acceptable reproductive control agent because it does not meet two of our four criteria for an acceptable reproductive control agent. First, PZP is only currently effective for up to two years. Research is on-going to determine whether it will be effective for longer than two years. Second, the FDA/EPA has not determined whether vaccine components pose a human health risk. Therefore, the animals must be permanently marked so as not to enter the human food chain.

Once the deer population is reduced won't deer move into the park from surrounding areas and remaining deer simply reproduce more?

Park tracking data indicate that there is little movement across the park boundary – either deer coming in or deer going out. Female deer spend most of their time within the park and travel an average distance of

401 to 1400 feet from the park boundary. These data also suggest deer density in areas surrounding the park is similar to the target deer density of 31 to 35 deer per square mile. The home range of deer in the park is also very small – less than ½ a square mile. Although males may travel further during dispersal, we do not expect significant immigration/emigration (deer moving into or out of the park).

White-tailed deer have a high reproductive capacity and reproductive rate is considered a primary indicator of deer condition. Under the selected alternative the deer reproductive rate would be expected to remain high or to increase over time in adult females. The reproductive rate in fawns and yearlings would be expected to increase over time as deer density was reduced and habitat quality improved. This is considered a long-term beneficial impact, because it would indicate deer are in good or improved condition.

The plan/EIS is intended to guide long-term management of white-tailed deer in the park. While the reproductive rate of deer may increase in response to a decrease in the overall population and some deer may move into the park from the surrounding area, future deer removal actions would take into consideration any population growth and adjust management actions (e.g., number of individuals removed) as needed through the adaptive management process.

Many park visitors love seeing the deer. Will they still be able to see deer when they visit the park in the future?

Yes, there will continue to be deer in the park. Maintaining a deer population in the park is one of the objectives of the plan/EIS.

Will the number of deer-vehicle collisions go down as a result of this action?

An estimated 86 deer-vehicle collisions occur within the park annually. The NPS expects that as the deer population is reduced in size that the number of deer-vehicle collisions will also go down.

Has the park started to implement the selected alternative?

Yes. The park will implement the second year of lethal reduction activities beginning in November 2011 and extending through March 2012. During the first year of lethal reduction activities park staff worked with the United States Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services on 16 nights between November 2010 and March 2011, to remove 600 deer from the park. Meat resulting from this action was donated to the Central Pennsylvania Food Bank and provided to food pantries, soup kitchens, and other organizations across 21 counties in Pennsylvania. A total of 18,330 pounds of venison was donated during winter 2010-2011, including 3,000 pounds of venison donated locally in Chester County. A total of 271 deer were tested for Chronic Wasting Disease (CWD), and all of these deer tested negative for the presence of the disease.

Who do I contact if I have questions or concerns?

Please contact our Natural Resource Manager, Kristina Heister, at 610-783-0252 or kristina_heister@nps.gov. Please contact your local law enforcement agency if you have concerns after park hours.