How to Provide Comments

Public participation is vital to our planning process. Because of your interest in Catoctin Mountain Park, we are requesting input in developing the alternatives to be evaluated for the White-tailed Deer Management Plan/Environmental Impact Statement (EIS). Please join us April 20, 2005 from 6:00 to 9:00 at Catoctin High School for the Alternatives Development Workshop to provide your input on the range of deer management alternatives. If you cannot attend the alternatives development meeting, you can still participate by submitting comments by May 4, 2005 to:

Superintendent
Catoctin Mountain Park
6602 Foxville Road
Thurmont, Maryland 21788

A pre-addressed comment form is enclosed. Please be sure to include your full name and address with the comments so we may add you to our mailing list for information on future items in this process.

You may also comment on-line using the NPS's Planning, Environment, and Public Comment (PEPC) web site at: http://parkplanning.nps.gov.

Schedule

Public Scoping Meeting held November 9, 2004

Alternatives Development Workshop April 20, 2005

Public Comment Period on Alternatives Workshop Ends May 4, 2005

Draft EIS Preparation

Draft EIS Released for Public Comment

60 -Day Comment Period and Public Meeting on EIS

Comment analysis and response, revision of the Draft EIS

Final EIS released

30 day waiting period

NPS decision, Record of Decision released

Updates on the Planning Process will be provided at www.nps.gov/cato. Details about the proposed alternatives can be found on the NPS's Planning, Environment, and Public Comment (PEPC) web site at: http://parkplanning.nps.gov after April 14, 2005.

National Park Service
U.S. Department of the Interior
Catoctin Mountain Park
6602 Foxville Road
Thurmont, MD 21788-1598

Catoctin Mountain Park
Thurmont, Maryland

National Park Service
U.S. Department of the Interior

White-tailed Deer Management Plan Environmental Impact Statement

Alternatives Development Workshop | April 2005

You're Invited!

Please join us April 20, 2005 from 6:00 pm to 9:00 pm at Catoctin High School (14745 Sabillasville Road, Thurmont, Maryland) for the Deer Management Alternatives Development Workshop.

The purpose of this meeting is to provide the opportunity for public comment on the four deer management alternatives presented in this newsletter, as well as other potential alternatives or alternatives considered but not carried forward. The meeting will begin with brief presentations on the history of deer management activities at Catoctin Mountain Park, a brief description of the selected alternatives, criteria for reasonable alternatives, summary of the NEPA process, and meeting format. In brief, participants will break into small facilitated groups after the presentations to discuss comments and concerns on the preliminary alternatives. After comments have been collected, the groups will reassemble and the comments and concerns identified in each small work group will be presented to everyone by the group facilitator. The comments and concerns gathered at the workshop will be used in the development of the Draft White-tailed Deer Management Plan/EIS.

Purpose of Action

The purpose of this action is to develop a deer management plan that supports forest regeneration, providing for long-term protection, conservation, and restoration of native species and cultural landscapes.

Need for Action

1. Excessive deer browsing reduces forest regeneration, resulting in adverse changes to the forest structure, composition, and wildlife habitat.

2. Browsing by large numbers of deer in Catoctin Mountain Park could adversely affect natural distribution, abundance, and diversity of native species, including species of special concern.

3. Excessive deer browse has impacted native shrubs, trees, and forest systems that comprise the natural vegetation component of the Misty Mount and Greentop cultural landscapes.

4. There is an opportunity to foster greater cooperation with other jurisdictional entities currently implementing deer management actions. Coordination could help achieve mutual deer management goals.

Objectives

Vegetation

1. Reduce adverse effects of deer browse pressure to ensure sufficient tree regeneration in order to reach the desired future condition of a sustainable eastern hardwood forest with a native and diverse forest structure.
2. Provide protection for threatened, endangered, and sensitive plant species and their habitats (e.g., the purple fringed orchid) from adverse impacts related to deer browsing, and do not allow browsing impacts to lead to extirpation.
3. Maintain, restore, and promote a mix of native herbaceous plant species, and reduce the competitive advantage of invasive exotic plant species over native plant species through effective deer management.
4. Develop informed, scientifically defensible vegetation and wildlife impact levels and corresponding deer population densities to adaptively manage and reach the desired future condition.

Wildlife and Wildlife Habitat

1. Maintain a viable white-tailed deer population within the park while protecting other park resources.
2. Protect lower canopy and ground nesting bird habitat from adverse impacts from deer browsing.

Cultural Resources

Ensure that vegetation contributing to the park's cultural landscape is protected from the adverse effects of deer behavior (browsing, trampling, seed dispersal).

Visitor Experience

1. Educate the public regarding the deer population and the forest regeneration process and diversity, including the role of deer as part of a functioning ecosystem, not the primary driving force within it.
2. During the implementation of any management action, minimize disruption to visitor use and experience or adverse impacts to visitor safety.

Preliminary Alternatives

The Alternatives Development Workshop will focus on four preliminary alternatives, which were developed based on internal scoping and public input received at the November 9, 2004 public meeting and on NPS policy review of the preliminary alternatives presented at the first public scoping meeting. Below is a brief discussion of these preliminary alternatives. For a more detailed discussion, please visit NPS's Planning, Environment, and Public Comment (PEPC) web site after April 14th, 2005 at: http://parkplanning.nps.gov and look under Catoctin Mountain Park, or call the park at 301-416-0536.

The following elements would be part of all alternatives evaluated in the White-tailed Deer Management Plan/EIS:

- Continue protecting landscaped areas within the park by fencing and/or application of repellants.
- Continue fencing rare plants and habitat with small exclosures for protection. The park has two state-listed plants that are currently fenced at all known locations. As rare understory plant species are found within the park, they would continue to be protected with additional fencing. Currently there are 20 of these small exclosures in the park. One small wetland encompassing 4,000 square feet is also protected because it represents sensitive habitat.
- Use scientific monitoring and modeling methods to determine when deer population levels reach a threshold where management action is necessary. Current monitoring of both vegetation impacts and deer population would continue and be expanded as necessary in order to correlate impact levels with deer population numbers.
- Maintain communication and input from other organizations. Such activities would include implementing education and interpretive measures, displaying exhibits at visitor centers, expanding the park's web site to include information on deer management, producing brochures and publications, and providing education about the negative effects of feeding deer.

Alternative A: No Action Alternative (Existing Management Continued)

Under the No Action Alternative, Catoctin Mountain Park would continue to implement deer population monitoring, including distance sampling and herd health checks, as well as activities to protect native plant species, such as creating and monitoring exclosures, as outlined in the current Deer Management Plan. Current inventorying and monitoring efforts would continue to record forest regeneration and deer population numbers within the park. Educational and interpretive activities would continue to be used to inform the public about deer ecology and park resource issues. No additional deer management activities would take place. This alternative serves as the baseline for analyzing and comparing the effects of the other alternatives.

Direct Reduction as a Standalone Alternative

Direct reduction of the deer population was considered as a standalone alternative, but dismissed because secure areas within the park and areas of high visitor use would make sharpshooting dangerous in those locations, requiring other methods in addition to direct reduction to achieve deer density goals. Therefore, sharpshooting was included in the lethal alternative but dismissed as a standalone solution.

Special Hunt

The Catoctin Mountain Park Deer Management Plan Internal Scoping Report (NPS 2004) listed a special park hunt as a preliminary alternative to undertake direct reduction of the deer herd. A public hunting alternative for Catoctin Mountain Park is being rejected because it would be inconsistent with long-standing NPS policy. In 1984, NPS promulgated Title 36, Code of Federal Regulations, Section 2.2, that states public hunting is allowed in national park areas only where specifically mandated by federal statutory law. No provision to allow hunting exists in the legislation for Catoctin Mountain Park. Because Congress has not acted in the past to allow hunting within the park, the prospect of congressional action at this time is considered remote. Given the security issues involving Camp David, the Presidential Retreat that lies within Catoctin Mountain Park, the prospects for a legislative change to allow hunting are even more remote. Therefore, this alternative is being rejected at this time.

Capture and Euthanize as a Standalone Alternative

Capturing and euthanizing deer was considered as a standalone alternative but dismissed due to the difficulty and expense associated with capturing enough deer to sufficiently reduce the population to reach forest regeneration goals. This lethal method of population control is less efficient and more stressful to deer than sharpshooting. This alternative was added to the lethal combination alternative because it could be used as an alternative to sharpshooting in areas of the park where shooting may be limited for safety and security reasons, or to target specific problem deer.

Experimental Forest Regeneration as a Standalone Alternative

As a result of public scoping, an Experimental Forest Regeneration Alternative was suggested that would use large exclosures (e.g., 1-5 hectares, or 0.5 – 2.3_acres) to improve the understanding of deer impacts and allow for recovery of large blocks of vegetation. Establishing large exclosures would test the ability of native plants to recover from deer herbivory, determine the viability and composition of seed banks, and allow for a better understanding of the ecology of the park. The NPS agrees, and incorporated this alternative into the proposed non-lethal alternative.

Ecosystem Management Alternative

During public scoping, an Ecosystem Management Alternative was suggested that would evaluate "various natural and artificial phenomena" affecting the park, such as historic uses, chestnut blight, dogwood anthracnose, storms, and the recent appearance of predators. This alternative would address the park ecosystem, focusing on the "larger picture" and "develop a deer management plan that supports forest regeneration providing for long-term protection, conservation, and restoration of native species and cultural landscapes." The NPS believes that forest regeneration is a crucial component of ecosystem health, and recognizes that many factors influence ecosystems. However, action is needed at this time to address deer browse impacts specifically, which represent existing conditions that "need to be changed and problems that need to be remedied," requiring a focus on deer management as a primary component of overall ecosystem health. Other factors influencing forest regeneration, such as historic activities and disease, have been incorporated into the evaluation of impacts in this plan. Therefore, the Ecosystem Management Alternative has been dismissed from further analysis.

Research Alternative

During public scoping, a Research Alternative was suggested that would be based on the premise that Catoctin would "serve a more valuable role in determining the long-term consequences of having an 'overabundant' deer herd if it were left without a proactive management scheme in place." Such an alternative would closely evaluate the potential utility of a coordinated effort to link different experimental "treatments" with a "control" that would allow for research questions as yet unanswered to be better addressed. Catoctin Mountain Park has been monitoring forest system health and impacts from deer browse for over 20 years, and evidence shows that the forest is no longer naturally regenerating due in large part to browse impacts. To continue following a purely research-oriented path would not meet the plan's objectives. For these reasons, the Research Alternative has been dismissed from further analysis.

Bow-Hunting Only

During public scoping, it was suggested that bow hunting only be offered as an alternative. Public hunting of any type (including bow hunting) has been dismissed as defined under "Special Hunt," above.

Haze Deer into State Park

An alternative provided during public scoping suggested using volunteers to move deer out of Catoctin Mountain Park across Rt. 77 into Cunningham Falls State Park, "where hunters will be waiting" to shoot the deer. This alternative was dismissed for safety reasons. Pushing deer across a busy highway could increase the potential for deer/vehicle collisions. In addition, volunteers might inadvertently chase deer across the highway, putting themselves at risk of being hit by a vehicle. Furthermore, hunters waiting along the state park boundary to shoot toward deer coming from Catoctin Mountain Park would put the volunteers at risk of being shot. For these reasons, this alternative has been dismissed from further analysis.

Birth Control in Deer Food

Another alternative provided during public scoping suggested providing deer with food laced with birth control. This alternative was dismissed because the technology has not been developed that allows for adequate doses of contraceptive drugs to be administered in this form. Additionally, other wildlife could also eat the same food, and the various contraceptive drugs have not been tested for reactions in other animals.

Alternatives Considered but Not Being Carried Forward

The following is a brief description of alternatives considered but not being carried forward. For a more detailed discussion, please visit NPS's Planning, Environment, and Public Comment (PEPC) web site at: http://parkplanning.nps.gov and look under Catoctin Mountain Park or call the park at 301-416-0536, starting April 14, 2005.

Reproductive Control of Bucks

Another form of reproductive control includes the sterilization of bucks. This method requires that a large proportion of males in the population be sterilized. In populations with high immigration, periodic sterilization produced only moderate reductions in population size relative to an untreated population. If population immigration does not occur, long-term population stability would become an issue, along with genetic variability (a few nondominant bucks could breed the entire herd). If females did not become pregnant, their estrous cycle could be extended, resulting in later pregnancies and lower survival for fawns born later in the year. The population dynamics and genetic health of the herd could suffer under this alternative.

Predator Reintroduction

Reintroducing predators into Catoctin Mountain Park is not feasible due to a lack of suitable habitat large enough to support them. The proximity to growing human communities and adjacent livestock operations would result in conflicts with reintroduced predators that would prey on deer, such as gray wolves or cougars. Other native animals, as well as domestic pets, could also become potential prey if predators were reintroduced to the Catoctin area. In addition, the natural predation of deer in a small natural area such as Catoctin Mountain Park would not be effective in controlling the population at the level needed to protect and maintain plant abundance and diversity.

Use of Poison

Under this alternative, poison mixed with food sources such as grains would be used to kill deer. Death from poisoning would not be immediate, and health concerns resulting from people potentially hunting and eating poisoned deer that have wandered out of the park could be an issue. In addition, non-target native wildlife or roaming pets could potentially eat a tainted carcass or the poison itself.

Introduction of Parasites or Disease

Under this alternative deer parasites or disease would be introduced to kill deer. Death from such methods would not be immediate. Health concerns resulting from people potentially hunting and eating diseased deer that have wandered out of the park could arise. Non-target native wildlife or roaming pets could potentially eat a diseased carcass. In addition, such parasites or diseases have the potential to affect other wildlife species or even humans, or spread to the deer population outside the park.

Capture and Relocation

Under this alternative, deer would be captured and relocated to areas a sufficient distance from the park to ensure they would not return. Permits would be required from the Maryland Department of Natural Resources to relocate animals to other portions of the state. Deer could also be relocated out of state, but special permits, testing, and possible quarantine processes would be required due to concerns over chronic wasting disease. Given the abundance of deer in Maryland and most of the U.S., recipients for such a program would be very limited. Also, live capture and relocation methods can result in high mortality rates among captured and/or relocated deer, with a potential mortality rate of more than 50% of the deer during the first year after release.

Supplemental Feeding

Providing supplemental food sources for deer would potentially decrease browsing pressure on vegetation resources at Catoctin Mountain Park. However, increasing food sources would increase deer health and reproduction, increasing the deer population. In the long term, this would compound problems associated with high deer numbers.

Surgical Sterilization of Does

Under this alternative, female deer would be captured, tagged, and surgically sterilized, usually requiring a licensed veterinarian. They would then be released back into the park. In addition to the capture stress, stresses due to tranquilizers/anesthesia, surgical procedures, and recovery could increase mortality rates of sterilized individuals. Additionally, some researchers suggest that, depending on the type of sterilization used, changes in animal behavior would be expected from changing hormone production in the treated animal.

Fencing the Entire Park

The entire park could be fenced (at a minimum height of approximately 8 feet) to prevent deer from entering or leaving Catoctin Mountain Park. Vegetation within Catoctin Mountain Park would continue to suffer the effects of deer browse, the deer population within the fenced area would continue to increase, and the health of the contained herd would suffer. Therefore, all deer within the fence would either need to be removed or the deer population within the fence would need to be managed with other methods to meet the goals of the park management plan.

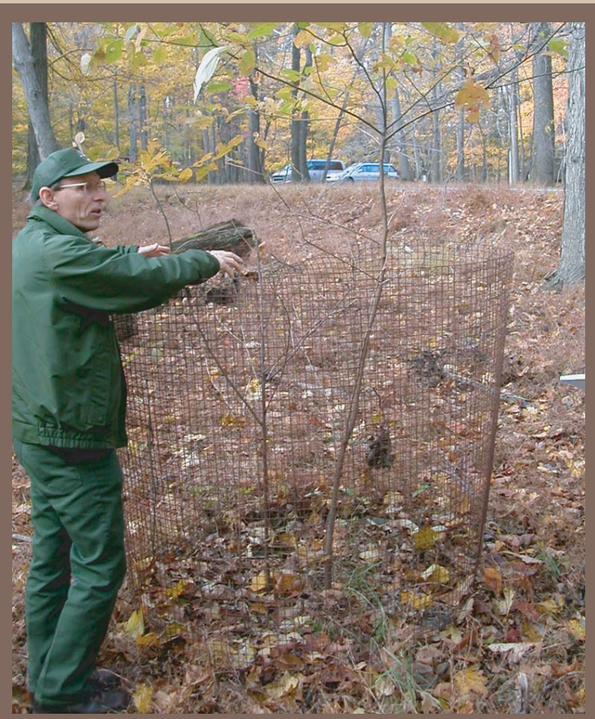
Fencing and Repellents as a Standalone Alternative

Fencing large areas of the park and applying repellents to particular plants or areas when used without other management methods would not meet the plan's objectives. The fencing and repellents alternative was dismissed as a standalone option because of the time that would be required to achieve forest regeneration. Furthermore, neither fencing nor repellents would reduce the density of deer in the park, thereby allowing deer browsing pressure to continue. Fencing and repellents were determined to be most effective when combined with other management measures that included deer density reduction methods.

Reproductive Control as a Standalone Alternative

The use of reproductive control in does as a standalone alternative was considered, but given the current size and lack of containment of the Catoctin deer population it was decided that this alternative would not meet the plan's objectives and was more feasible as a component of other alternatives. Research has shown that controlling population growth using current contraceptive technology on populations greater than 200 animals, where deer are not contained, is not feasible. Therefore, in order for this method to be effectively used in achieving the plan's objectives, the doe population would first need to be reduced to fewer than 100 does in order for treatment to succeed or combined with another alternative to foster forest regeneration (Rudolph et al. 2000).

Example of single species fencing currently occurring and common to all alternatives.



Under all alternatives, NPS will continue to communicate with the public and other organizations on deer management and forest regeneration.

Alternative B: Combined Non-Lethal Actions: Fencing, Repellents, And Reproductive Control of Does

Several non-lethal actions would be used in combination to protect forest seedlings, promote forest regeneration, and gradually reduce deer numbers in the park. This alternative would use large-scale exclosures (fencing), repellents in limited areas, and reproductive control of does in selected fenced areas.

Fencing

- Fencing would include larger fenced exclosures, in addition to the smaller areas that would be fenced under all alternatives, to allow reforestation within the enclosed areas.
- A number of large exclosures would be constructed throughout the park, with the exact number and size to be determined, but will enclose approximately five percent of the park. Natural canopy openings as they occur would be given preferential treatment for location of the exclosures.
- The exclosures would have a minimum fence height of eight feet and be constructed of woven wire supported by both wooden and metal posts.
- Visitors would not be able to use the fenced areas during and after construction.
- It is estimated that at least 10 years would be required for seedling growth in the exclosures to exceed the maximum deer browse height (150 cm). After seedlings exceed 150 cm, the exclosures would be relocated to different areas of the park.

Repellents

- Commercially available deer repellents would be used in selected areas of the park where fencing would cause unacceptable visual impacts and where repellents are likely to have some success, which is measured in reduction of damage. Total elimination of damage should not be expected.
- Repellents would be used near existing developed areas and applied during the growing season.

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- There are generally two types of repellent products:
  - Odor-based repellents incorporate a smell that is supposed to be offensive to deer, such as human hair, soaps, garlic, rotten eggs, blood meal, seaweed, etc., and tend to work best in areas where deer have not adapted to close human interaction.
  - Taste-based repellents incorporate a taste that is offensive to deer, such as hot pepper juice, and tend to work in areas where deer have adapted to close human interaction and are already eating plants that are intended to be protected.
- Park staff would experiment with the available products to determine which works best in each application area.
- Repellents can have a short residence time when applied to plant material and must be monitored and applied frequently to retain their effectiveness.
- Large-scale application of repellents is not practical due to high application cost, label restrictions on use, and variable effectiveness. Repeated applications of spray repellents would be necessary due to weather and emergence of new growth.

Under Alternative B, fencing would be expanded to include large exclosures in addition to the small exclosures like the one above that protects maple seedlings.

Current methods of reproductive control cannot be effectively implemented for deer herds of more than 200 animals due to current drug availability, efficacy, and application technology.

Reproductive Control of Does

- Control of deer population would occur through use of contraceptives for female deer.
- Results would not be immediate, as it would take time for population levels to reflect decreased reproduction rates. At best, a 5 percent decrease in population would be expected after several years of contraceptive use, where 90 percent of the female deer are treated. Once becoming effective, the population would continue to decrease approximately 5 percent annually with continued treatment of 90 percent of the female deer (Hobbs et. al. 2000).
- Current methods of reproductive control cannot be effectively implemented for deer herds of more than 200 animals due to current drug availability, efficacy, and application technology (Rudolph et al. 2000).
- Under this option, a fenced area would be constructed in the park isolating a small number of deer to evaluate the effectiveness of contraceptive treatment of isolated deer populations. No large-scale treatment would be implemented until technology changes occur.
- Several contraceptive products are currently being researched for use in deer population control. Determination of the specific product to be used would be made based on the methods available at the time the action is implemented.
  - All deer treated with these agents must be individually identified, often accomplished using ear tags stating "Not for Human Consumption." To identify treated deer, each deer must be captured and handled at least once initially and may require additional handling annually for booster applications. Capturing and handling of deer for this treatment is time consuming, expensive, and potentially lethal to the deer.
  - The U.S. Department of Agriculture (USDA), Wildlife Service would likely administer reproductive controls. A federal contractor for federal agencies along the east coast of the U.S., the Wildlife Service is experienced with contraceptive control methods and has the necessary qualifications.
  - Depending on the technique used, sections of the park may be closed during the initial capture and processing for reproductive control. Capture and handling of deer is stressful and may result in a 1-3 percent mortality for all capture methods (DiNicola, pers. Comm. April 2004).

Alternative C: Combined Lethal Actions: Direct Reduction and Capture/Euthanize

Under this alternative, the USDA Wildlife Service and park staff would conduct direct reduction through sharpshooting to reduce the deer population in combination with the capture and euthanization of individual deer in certain circumstances where sharpshooting would not be appropriate.

Direct Reduction

- Direct reduction would be performed by USDA Wildlife Service staff who are experienced with direct reduction methods and have the necessary qualifications. NPS staff would support all operations.
- Bait stations would attract deer to safe removal locations. High-velocity, small caliber rifles would be used from close range. Every effort would be made to make the shootings as humane as possible. If a bullet injures a deer, the animal would be shot again as quickly as possible to minimize suffering. Noise suppression devices and night vision equipment may be used to reduce disturbance to the public.
- Compliance will be made with all federal firearm laws administered by the Bureau of Alcohol, Tobacco, and Firearms.
- The action would occur at night during late fall and winter months when deer are more visible in the park to reduce the amount of time required to complete the action. The public would be notified of the management action in advance of the activities. In addition, exhibits would be displayed at visitor centers, and information would be posted on the park's web site to inform the public regarding deer management actions. The park may close additional areas for a short duration beyond normal administration closures. Closures within the park will be limited due to the time of year the reduction occurs and low visitor use during those periods. Visitor access would be denied as necessary during the time the reduction is taking place and the park would be patrolled by NPS law enforcement to ensure public safety.
- Deer population monitoring would continue yearly during the removal effort, and, deer removal goals adjusted upward or downward based on the most recent population numbers.
- Venison would be donated to local charity organizations.

Capture and Euthanize

- In circumstances where sharpshooting would not be appropriate due to safety or security concerns, deer would be live-trapped and euthanized as humanely as possible using a physical technique. If live-trapping and physical euthanasia are not feasible, drugs for immobilization and/or euthanization would be employed. However, when drugs of any type are used, the meat cannot be donated as food and the carcass cannot be left to naturally decompose. This method would also be implemented on nuisance or injured deer.
- Trapping and euthanasia would result in increased stress levels in captured deer compared to the direct reduction method.
- Capture and euthanize would be implemented only in select situations and would supplement the other management measures described above.

Direct reduction would be performed by Wildlife Service staff who are experienced with direct reduction methods. The public would be notified of this management action in advance.

Alternative D: Combined Lethal And Non-Lethal Management

This alternative combines alternatives B and C.

- Fencing and repellents would be used to protect small populations of sensitive plant species, small plant restoration projects, or areas that cannot be managed in any other way due to proximity to buildings or visitors. Fencing would not reduce deer numbers, and would cause deer to concentrate browsing elsewhere, resulting in more damage to those areas.
- After using fencing and repellents to protect small areas of highly susceptible plant species, reproductive control would also be considered. Current methods of reproductive control cannot be effectively implemented for deer herds of more than 200 animals. In addition, reproductive control is not currently suitable in many places in the park because of the need to enclose the deer within a fence. This treatment option will be considered if new technologies are approved for reproductive controls that are suitable for management actions at a park-wide level.
- If reproductive control is allowed as a management strategy, it would be implemented after any direct reduction efforts. If reproductive controls are used as a research strategy within the park, it would be implemented at the same time as direct reductions.
- If reproductive control were not allowed, direct reduction would be used to control the deer population in areas of the park where immediate reduction is necessary due to unacceptable resource damage.
- Capture and euthanasia would be implemented in areas where sharpshooting is not possible. This procedure would include trapping or immobilizing deer using the technique that would create the least amount of stress. If immobilization drugs are used, the mean will not be available for human consumption.