



Draft White-tailed Deer Management Plan/EIS

Overview

This plan incorporates an adaptive management framework to support long-term protection, preservation, and restoration of native vegetation and other natural and cultural resources in Rock Creek Park.

- Rock Creek Park is mandated to protect the forest.
- Action is needed to address excessive deer browsing impacts that prevent the forest from regenerating.

Adaptive Management

is an iterative process. Tree seedling numbers are monitored to determine when deer population numbers are at an acceptable level and will verify whether the plan's initial deer density goal needs to be revised. This process will be used regardless of the alternative selected by the NPS.

Vegetation Studies

The long-term unfenced vegetation monitoring plots in the park showed natural tree seedling stocking rates (tree regeneration) declined significantly from 11% in 1991 to 2% in 2007, well below the recommended stocking rate of 67% necessary for successful forest regeneration.

Stocking Rate is the number of seedlings present in a specified area of forest. Studies are done in managed and unmanaged forests to estimate the number of tree seedlings needed to replace the present mature tree canopy and sustain the forest into the future.

Paired vegetation plots (a fenced plot to keep deer out paired with an unfenced, open plot) clearly demonstrate the adverse effects of overabundant deer on the structure and species richness of native plants in the forest and diminish the value of park habitats for other wildlife.



Constructing enclosed plots for vegetation monitoring

Threshold for Taking Action

The threshold for action occurs when less than 18 out of 26 (67%) of monitored long-term plots have less than 153 tree seedlings, which is the required minimum number in each plot.

After reviewing studies in the mid-Atlantic, Rock Creek Park has identified an initial deer density goal of 15 to 20 deer per square mile. When 67% of the plots have 153 or more tree seedlings, the deer density goal may be revised, using the adaptive management framework described in the plan.



Background

White-tailed deer have increased substantially within and around Rock Creek Park in recent years. In 2007, monitoring indicated that there are 82 deer per square mile in the park; this is about four times higher than the deer density goal identified in the plan. Results of monitoring in recent years have documented the adverse effects of overbrowsing on plant communities in the park. Of critical concern is the overbrowsing on tree seedlings; tree seedlings are essential for sustaining a forest.

The draft plan/EIS is available online at:
<http://parkplanning.nps.gov/rocr>

From this website you may also submit comments electronically. The deadline for submitting your comments is November 2, 2009.

Alternatives

Alternative A: No Action

Current deer management actions and policies would continue:

- Monitor deer density
- Monitor vegetation
- Manage data
- Research & study
- Educate & interpret for park visitors
- Communicate with other jurisdictions
- Overbrowsing by deer prevents adequate forest regeneration
- Protect rare plants in natural areas and small areas in landscaped and in cultural areas with cages and/or limited use of deer repellents.

Alternative B: Combined Non-lethal Actions

Includes all actions described in alternative A and:

- Construct large-scale deer exclosures (7 to 25 acres), preventing deer access
- Control doe reproduction via sterilization and/or an acceptable reproductive control agent that meets the plan's five criteria.

Alternative C: Combined Lethal Actions

Includes all actions described in alternative A and:

- Quickly reduce deer numbers by sharpshooting or capture and euthanasia of individual deer, where sharpshooting may not be appropriate.

Alternative D: Combined Lethal and Non-Lethal Actions

Includes all actions described in alternative A, and combines selected additional lethal and non-lethal actions from alternatives B and C to reduce deer numbers.

- Quickly reduce deer numbers by sharpshooting or capture and euthanasia of individual deer
- Maintain deer numbers by
 1. sharpshooting
 2. control doe reproduction via an acceptable reproductive control agent that meets the plan's five criteria.

Reproductive Control Agents

Studies of reproductive control agents (drugs) show a decrease in deer populations. Studies, such as at the National Institute of Standards and Technologies in Gaithersburg, Maryland (1994 to present), and Fire Island National Seashore, New York (1993 to 2007), have been conducted on largely confined or fenced populations, unlike the free-ranging deer population at Rock Creek Park. In these studies, various reproductive control agents such as PZP, which is the most common, have slowly reduced the confined populations. However, no studies have shown that reproductive control agents can reverse tree seedling loss.

So far, the deer reproductive control agents used elsewhere have not reduced the density of free-ranging deer populations to the levels identified in the plan in a short period of time, nor are there reports of vegetation recovery where they have been used.

Reproductive Control Agents Must Meet Five Criteria

To be used in Rock Creek Park, a reproductive control agent must:

1. Be federally approved for application to a free-ranging population,
2. Provide multiple year efficacy,
3. Be administered remotely without handling the deer,
4. Leave no chemical residue in the meat, and
5. Show success through scientific peer reviewed publications based on a free-ranging white-tailed deer populations.

Deer are substantially altering the ecological communities in Rock Creek Park by decreasing tree seedlings and changing species abundance and their community structure. Therefore, it is imperative that Rock Creek Park take action to address these issues.

NPS Preferred Alternative

Alternative D was identified as the preferred alternative because it would provide the park with a wider variety of management methods, including both lethal and non-lethal options. The advantage of including a lethal management option is that it would reduce the deer population to the initial desired deer density (15-20 deer per square mile) in a relatively short time period (1-3 years). This would allow for forest regeneration to begin much more quickly as opposed to using solely non-lethal control methods, such as those described under Alternative B.

The deer population would then be maintained at a level that allows for successful forest regeneration, using a combination of lethal and non-lethal methods, providing the reproductive controls meet the required criteria.

Trained federal employees such as the U.S. Department of Agriculture-APHIS-Wildlife Services, and not the general public, will conduct the sharpshooting. The sharpshooting will occur at night during winter months in closed areas of the park.

Montgomery County, Maryland, Fairfax County, Virginia, and USDA- National Arboretum, District of Columbia, use sharpshooting to reduce deer numbers. For over 10 years, many of these management actions have been carried out in close proximity to roads and residential areas with no incidents.

