

Deer Damage Management Plan for Rutgers Ecological Preserve

November 2015

Frequently Asked Questions (FAQ)

What is the Rutgers Ecological Preserve?

The Rutgers Ecological Preserve and Natural Teaching Area is a designated 400 acre tract of land that is part of a larger 425 acre tract of undeveloped forest land. The EcoPreserve was established in 1976 by the Rutgers Board of Governors with the goal of preserving the natural ecological characteristics of the property and that it serve as outdoor teaching area for the university.

Is white-tailed deer overpopulation a problem at the Rutgers Ecological Preserve?

Yes, there is an over population of white-tailed Deer occupying the Rutgers Ecological Preserve (RUEP) located on the Livingston Campus of Rutgers University. The deer are causing increasing damage to the plant life and causing a danger to vehicles traveling on the perimeter roads.

How does an overpopulation of deer affect the forest?

As any homeowner knows that lives near the tracts of woodland in New Jersey, white-tailed deer browse on the buds and twigs of shrubs and low-growing trees, as well as feed on herbaceous plants, flowers and grasses. The notable absence of native understory vegetation in the Rutgers EcoPreserve, as well experimental plantings of tree seedlings and shrubs provide strong evidence of the influence of excessive browsing by white-tailed deer. It is interesting to note that Helyar Woods (a nearby tract of mature forest in North Brunswick) which does not have a significant deer population still has an extensive cover of native shrubs and spring wildflowers.

Why is the loss the native plant understory important?

Recent vegetation inventories conducted by Rutgers University faculty and students document a change in the natural ecological characteristics of the EcoPreserve when compared to studies conducted in the 1970's. Of major concern has been the loss of native understory shrubs, tree seedlings/saplings and wildflowers. Loss of this native vegetation represents a decline in forest ecosystem health, a loss of the overall biological diversity and enhanced vulnerability of the forest to invasion by exotic plant species. Gaps created by fallen trees would normally be quickly filled by regrowing saplings. Without advance regeneration of native tree seedlings and saplings, the forest is not able to respond to natural disturbance events such as the recent SuperStorm Sandy.

Can an overpopulation of deer present a public safety hazard?

Yes, over 85 deer-induced vehicle collisions in the vicinity of the EcoPreserve have been reported to University and local police forces during 2010-2012.

How many deer inhabit the EcoPreserve?

Due to the difficulty of censusing wild animals in their natural habitat, we do not have an absolute count of deer numbers. Based on a recent spotlight sampling of a portion of the EcoPreserve (approximately half of the entire EcoPreserve property and neighboring university lands), we estimate a population density of approximately 100+ deer per square mile. As way of reference, wildlife researchers have estimated that deer densities of 10 per square mile were typical prior to colonization of the United States and negative effects impacts to forest health become noticeable above this level. Natural resource management experts suggest that there is no single “magic number” as to an optimal population density of deer, as every forest is different. The key is whether there is observable evidence of the negative ecological and social consequences of overabundant deer, as is the case in the EcoPreserve.

Is deer overpopulation a problem elsewhere?

Similar loss of native understory shrubs, tree seedlings/saplings and wildflowers due to deer browsing has been documented throughout the northeastern and midwestern United States. The general consensus of the scientific and natural resource management community is that deer populations are out of balance and need to be actively managed (for more information, go to: <http://deerinbalance.org/deer-overabundance-research/>.) For an excellent on-line tutorial that explores impact of deer overpopulation on forest structure and health go to: <http://www.deerandforests.org/habitat>.

How can deer populations be managed?

Many preserves and open space conservation lands in central New Jersey employ managed hunting programs to reduce deer populations to levels that minimize the negative ecological and social consequences of overabundant deer. The Great Swamp National Wildlife Refuge, Schiff Nature Reserve, South Mountain Reservation, Washington Valley Park, and Watchung Reservation all employ some form of managed hunting to reduce deer populations. For example of a deer management plan used in Hopewell Valley area of New Jersey, go to: http://www.hopewelltpw.org/Final_Deer_Task_Force_Report_092710.pdf.

Why is a managed hunting program planned for the Rutgers EcoPreserve?

The goal is to reduce the high level of deer browsing pressure such that we see a significant increase in the amount and diversity of native understory vegetation, as well native tree regeneration in canopy gaps opened up by SuperStorm Sandy. A

secondary goal is to reduce the damage to landscape plantings on Livingston Campus, as well as neighboring properties. This will require sustained management over several years before we may be able to discern a significant response in the vegetation. A shorter term goal is to reduce deer-vehicle collisions on Livingston Campus, at a minimum, by 25% on an annual basis.

What kind of hunting will be allowed?

This deer population reduction program will rely on 'in-season' bow hunting only. This includes long, recurve, compound, and crossbow. The erection of temporary elevated tree stands and the use of bait will be permitted.

What is meant by a "managed" hunt?

The EcoPreserve will not be open to general recreational hunting but rather access will be limited to a smaller number of permitted hunters. Only 10 to 15 hunters will be permitted to hunt the property. Hunting will be limited to preset times and geographic zones and open only to properly licensed, vetted and permitted hunters (see below). Each hunter will receive a copy of the deer management plan and must carry a Hunt Smart Courtesy Card while on Rutgers property. Permitted hunters are also expected to work within the provisions of the plan and notify Rutgers University Police department whenever they enter and leave the property.

Who is responsible for overseeing this managed hunting program?

The deer damage management program is coordinated by natural resource and wildlife conservation professionals on the Rutgers University staff. The plan has been reviewed and approved by the members of a Deer Management Advisory Committee which includes participation from RU Police Department, Office of Risk Management, and Facilities, as well as by the RU EcoPreserve Advisory Committee and the Dean of the School of Environmental and Biological Sciences. Conservation officers of the New Jersey Division of Fish & Wildlife will also monitor the conduct of the hunt to ensure that all relevant NJ hunting regulations are followed.

Who will be allowed to hunt on the EcoPreserve?

All NJ licensed hunters (<http://www.state.nj.us/dep/fgw/licenses.htm>) may apply to participate in the EcoPreserve deer management program. However before being permitted to hunt, hunters must pass a background check with no prior NJ fish and game violations, pass a bow-hunting proficiency test, and post the required liability insurance. Each hunter will be required to shoot their bow to demonstrate their proficiency and safety to a Rutgers University designated official.

Have deer been hunted in the EcoPreserve before?

Yes, a deer management program was initiated in 2012 and twenty four deer were harvested in 2012-2013, 33 deer in 2013-2014 and 34 deer in 2014-2015.

Are deer managed by hunting elsewhere on Rutgers University property?

This management plan is modeled after the successful deer damage management plan employed on other New Jersey Agricultural Experiment Station (NJAES) lands. This management plan has been in operation for over five years and has kept deer populations in check, reducing damage to agricultural crops and native vegetation on these properties.

Is hunting safe?

Only bowhunting will be permitted and most shots will be from a tree stand angling towards the ground. This method of hunting is extremely safe with regard to missed shots or unwanted deflections.

How many deer will be harvested?

The goal in 2015/2016 will be to remove thirty five antlerless deer, mostly mature does, which is consistent with recommendations in the Fish & Wildlife Landowner Guide. Hunters will be requested to harvest 2 mature does before a buck can be harvested. The objective is to reduce the overall population of deer by reducing the number of reproducing does. We will continue to monitor the size and health of the deer herd, as well as the regeneration of the vegetation in the EcoPreserve to determine the proper levels of deer harvesting needed to reduce damage to forest health.

What will we learn from the controlled hunting program?

Successful hunters must report the date, time, sex, approx. age and weight of the harvested animal, as well as remove and return a single front tooth including the root. These data will provide information on the status of the population and health of the deer.

Are there alternatives to hunting to control deer populations?

In carefully controlled situations (i.e., in fenced populations), chemical means of birth control are feasible. However, these methods are expensive and require annual treatments of all the breeding does in the population. These methods are not feasible for an unfenced population of deer as in the EcoPreserve.

Where will the managed hunting take place?

Hunting will take place in only in a limited portion (approximately 150 acres) of the EcoPreserve that is not traversed by marked trails (see Zone 1a, 1B, 1D, 1C, 2A and 2B and 4 on attached map) and not adjacent to residential areas. An additional parcel (Zone 3) east of Cedar Lane will also be included in the managed hunting program. Regulations on no- hunting zones around private parcels will be followed. Hunting also will not be allowed within 150 feet from marked recreational trails and roads.

When will the managed hunting program take place?

The managed hunting program for this year will be open only from December 19, 2015 to February 20, 2016.

Will neighboring landowners and EcoPreserve users be notified of the hunt?

During the time period of the hunt, signs will be posted at the RUEP trailheads and other locations within the RUEP, informing the public that a deer management program is in progress. Adjacent landowners will be notified of the deer management program several weeks prior to the initiation of the program through the mail. Piscataway Township officials and police department, as well as the Conservation Office for the New Jersey Division of Fish & Wildlife has been informed of the controlled hunting program.

What will happen to the deer once harvested?

The deer will be butchered with a majority of the venison meat going to participating hunters. Some of the deer will be donated to the NJ *Hunters Helping the Hungry* program with the venison going to local food banks. We expect to donate approximately 200 to 250 pounds of venison meat.

Further Information:

For further information about the RU Ecological Preserve and the Deer Damage Management Plan, contact Dr. Richard Lathrop, EcoPreserve Faculty Director at 848 932 1580 or email lathrop@crssa.rutgers.edu

**Rutgers Ecological Preserve and Livingston Campus
Deer Management - Bow Hunting Zones: Dec. 2015 - Feb. 2016 (DRAFT)**



The Rutgers Ecological Preserve and Livingston Campus has approximately 148 acres of land available for deer hunting (bow only), as shown on this map. Also shown are areas closed for hunting; these areas were delineated by generating buffers from private parcels, Rutgers-owned parcels, Eco Preserve trails, adjacent roads, and clearings.

For more information, please go to <http://ecopreserve.rutgers.edu>.

-  No hunting areas (buffer)
-  Parcels in private ownership sharing boundary with buffer
-  Parcels in Rutgers ownership sharing boundary with RUEP
-  Trails
-  RUEP boundary

Data Sources: No hunting buffers, Trails: CRSSA; Eco Preserve boundary: Rutgers Office of University Planning and Development (RUOPD), revised by CRSSA; Parcels: RUOPD, NJOIT Office of GIS
Image data source: NJOIT Office of GIS; Map composed by the Grant F. Walton Center for Remote Sensing and Spatial Analysis (CRSSA), Rutgers University, 2014 **Revised 10/23/2015**