

# Wildlife Liaison Report

## Discussion

Deer densities recorded in Raritan Township in 2017 were three to seven times higher than the ecological management targets of 10/mi<sup>2</sup>. Examples of possible solutions to this problem exist in the management of nearby townships and preserves where deer populations are being managed effectively to support ecosystem health and recovery. Deer exclosures of varying sizes have been erected by a variety of local land trusts, including Duke Farms (1 mi<sup>2</sup> exclosure), Great Swamp Watershed Association (28 acres), and NJ Conservation Foundation (ca. 400 acres), which presents the most effective way of controlling deer numbers. While not completely free of deer, these exclosures have allowed for vigorous sapling growth to return to forests comparable to the levels found in New Jersey forests prior to deer overpopulation. At a minimum installation cost of approximately \$1/ft. combined with perpetual monitoring and maintenance, such solutions are feasible for protecting sections of parks and preserves in a targeted manner in order to provide at least some areas where the forest understory and the ecological values that it provides for native flora, wildlife, and others might be restored. For the many thousands of acres of forests in need of protection in the region, however, other strategies must be pursued to allow for regeneration to occur.

Figure 1. Results of Deer Spotlight Surveys in Raritan Township in April 2017

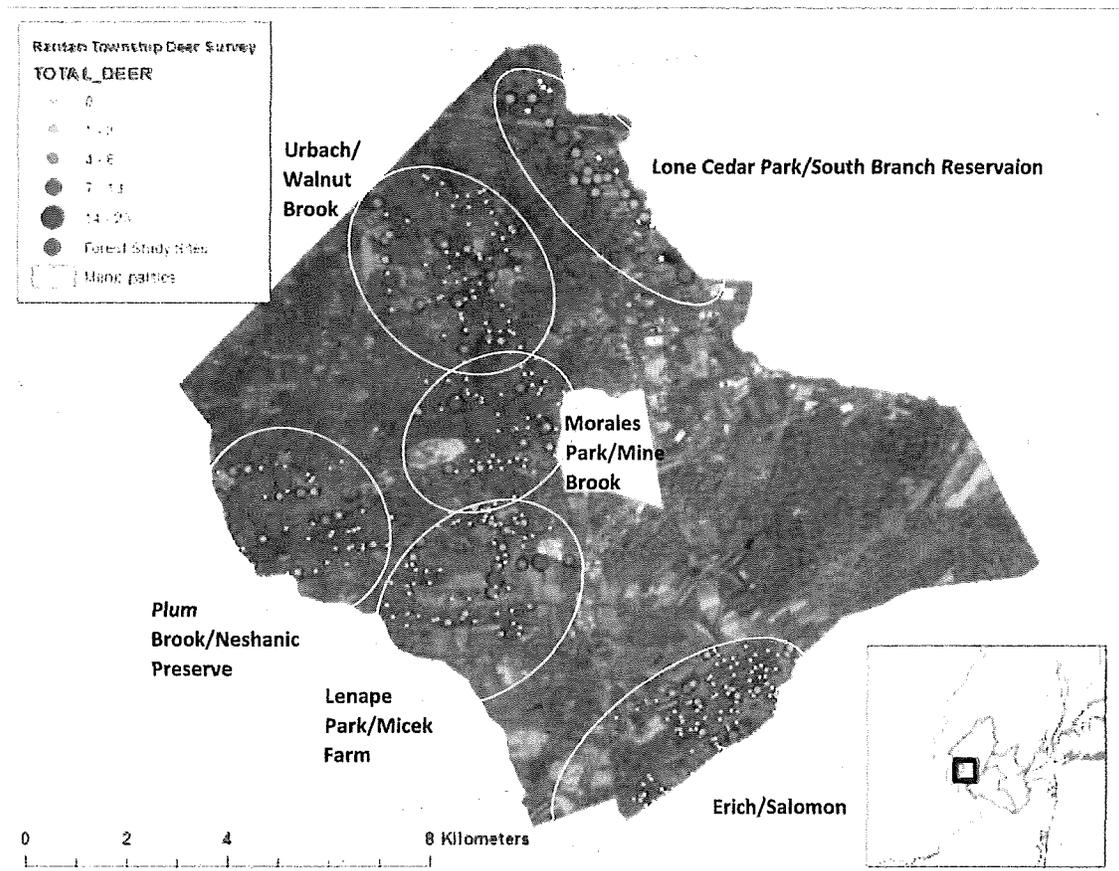
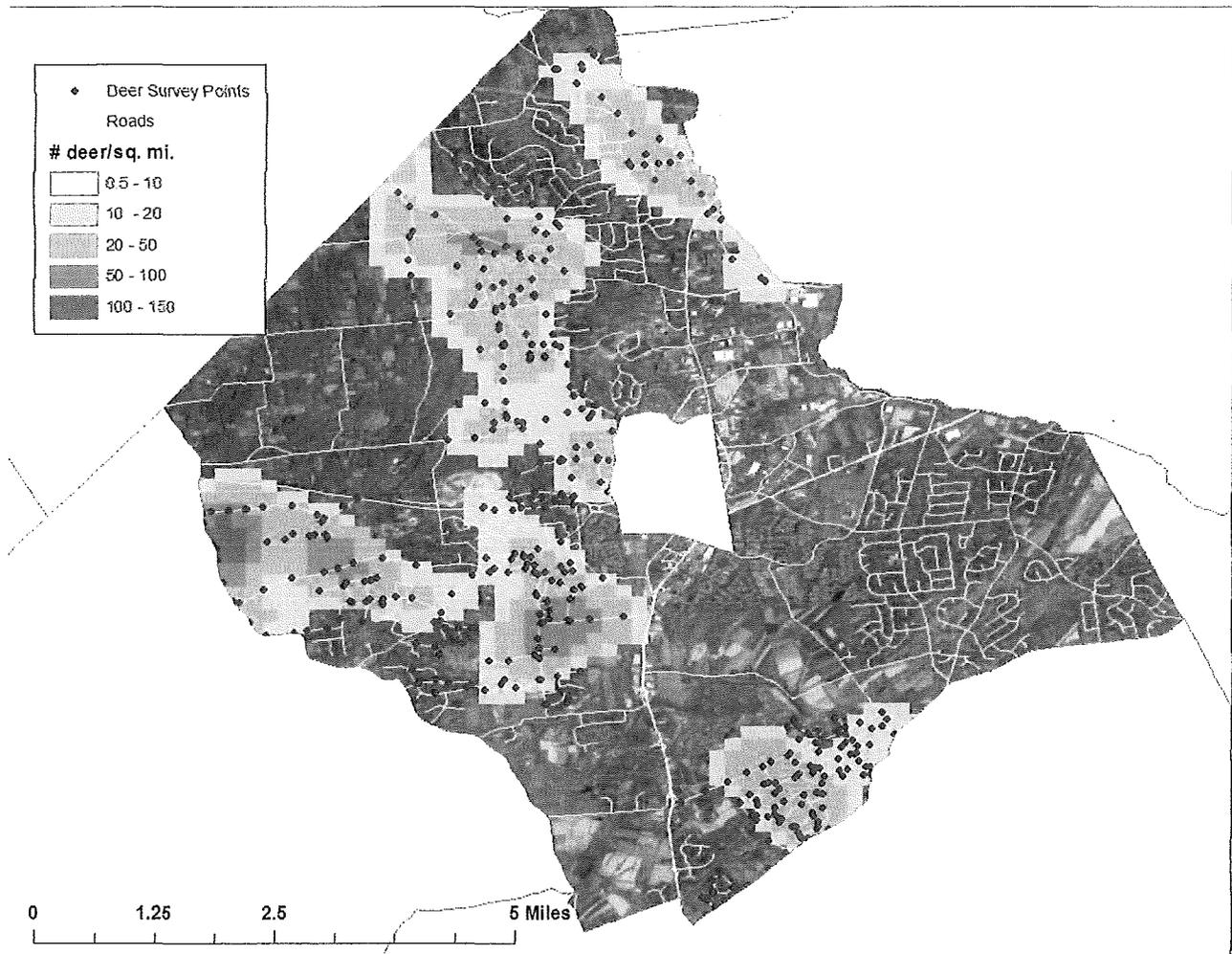


Table 1. Deer Densities According to Survey Route in Raritan Twp in April 2017

Survey Route	# Deer	Search Area (mi <sup>2</sup> )	Total Density (Deer/mi <sup>2</sup> )
Plum Brook	54	1.04	51.8
Walnut Brook	85	1.2	71
Morales Park	49	1.19	41.2
South Branch Reservation	51	1.1	41.5
Lenape Park	61	1.1	55.3
Erich/Salomon	42	1.2	35

Figure 2. Map of Localized Deer Density Along Survey Routes in Raritan Township in 2017



In order to protect larger areas of natural areas, as well as the public at large, intensive hunting appears to be both feasible and effective in many areas as well. Sharpshooters and/or community-based hunting programs have been implemented at a variety of locations and have been effective at reducing deer numbers to varying degrees. Princeton, Bernards Twp. and Duke Farms drastically reduced their numbers from densities of over 35-80/mi<sup>2</sup> to 12-18/mi<sup>2</sup> using a combination of sharpshooters and organized local hunters, with proportionate declines in deer-vehicle collisions (Williams et al. 2010). These programs, in turn, also resulted in increases in forest regeneration (Kelly unpubl. data). Duke Farms has been able to maintain deer densities below 20/mi<sup>2</sup> using organized hunting even outside their main enclosure, despite initial densities as high as >200 mi<sup>2</sup> in portions of the preserve (Almendinger pers. comm.). Organized hunting of various kinds has also been employed at other nearby preserves, including open space in Readington Township, Hunterdon County Open Space, and Hunterdon Land Trust properties. The effectiveness of hunting at reducing deer populations, however, highly depends on the type of hunting program implemented and the skill and effort of hunters involved. Reporting requirements are needed to determine whether hunting on individual properties is taking place, and the implementation of proper incentives and/or explicit management targets for each property are needed to ensure that the programs are effective. The completion of these baseline surveys in 2017 prior to the implementation of hunting on public open space properties in 2017-2018, combined with baseline forest monitoring plots (Kelly 2017), should provide useful data to document the effectiveness of these programs in Raritan Township in the future.

#### Literature Cited

Alverson WS, Waller DM, Solheim SL. 1988. Forests to deer: edge effects in northern Wisconsin. *Conservation Biology* 2: 348-358.