

Those of you that have traveled on Rt 116 or Tunk Hill Road in Scituate recently may have noticed and wondered about the small fenced pens on Providence Water property. While many fenced areas are constructed to keep animals in, these are meant to keep an animal, white-tailed deer, (*Odocoileus virginianus*) out. Fencing to exclude deer have been found to be an effective way of demonstrating the effect, if any, they are having on a forested ecosystem. The two sites were formerly occupied by red pine that was harvested several years ago. There are three exclosures at each site, in one exclosure at each site, locally collected acorns were sown, one had native hardwoods planted within them during the spring of 2010, and the third will be allowed to develop on its own. An informational sign has been constructed at the Rt 116 site.

Providence Water commissioned a study to determine what impacts, if any, white tailed deer were having on the forest. The recently completed study conducted by Natural Resource Consultants, Inc. of Fort Hill, PA, concentrates on approximately 1,000 acres in the vicinity of Tunk Hill Road. The focus was not on the number of deer, but rather the impacts they are having on tree seedlings, saplings and the native shrub and herbaceous community. Part of their field work included using a program, SILVAH, developed by the U.S. Forest Service that provides a quantitative, analytical approach for inventorying and evaluating tree regeneration and deer impacts. This allows for the actual regeneration to be compared to an existing index for regeneration and deer impact, to determine if the existing regeneration is adequate for the forest to replace itself when the overstory is removed. Measurements were made on 283 plots and it was found that the oak and hardwood regeneration is only a fraction of what a healthy forest should and that the deer browse level is high.

There is also strong evidence that high deer populations contribute to the spreading of invasive plants and the decrease in native wildflowers. A good overview on white-tailed deer overabundance is *Impacts of White-Tailed Deer Overabundance in Forest Ecosystems: An Overview* by Thomas J. Rawinski, a botanist with the U.S. Forest Service, and can be found online at www.na.fs.fed.us/fhp/special_interests/white_tailed_deer.pdf.

Deer are described as overabundant when they limit the occurrence of another valued resource or interfere with some valued ecological process. It is clear that given this definition, white tailed deer are overabundant on Providence Water lands.