



White-tailed Deer Management Plan/Environmental Impact Statement Purpose, Need, Objectives

PURPOSE

The purpose of this White-tailed Deer Management Plan and Environmental Impact Statement (plan/EIS) is to develop a deer management strategy that: supports protection, preservation, and restoration of native vegetation and other natural and cultural resources at the Seashore and reduces undesirable human-deer interactions in the Fire Island communities. The plan/EIS also promotes public understanding of the complex relationship between deer and Seashore resources, tick-borne diseases, people, and human infrastructure.

NEED

Seashore staff have been working to understand and address issues linked to the deer population on Fire Island for 30 years. Concerns were initially focused around a noticeable increase in the number of deer within the Fire Island communities and the incidence of Lyme disease among Fire Island residents. Impacts of deer browsing on vegetation were also among the major concerns. In the mid-1980s, researchers documented a substantial decline in the diversity and abundance of key plant species in the Sunken Forest, one of the Seashore's rarest plant communities. More recently, Seashore staff have turned their attention to the threat posed by deer to native vegetation in other natural zones of the Seashore and the cultural landscape of the William Floyd Estate.

Information collected as part of research conducted at the Seashore indicates the need for a management plan to address impacts associated with changes in white-tailed deer abundance, distribution, and behavior, including

- adverse impacts on native vegetation resulting from heavy browsing by white-tailed deer
- adverse impacts on natural and cultural resources at the William Floyd Estate resulting from heavy browsing by white-tailed deer
- adverse interactions between deer and humans and the developed environment as a result of
 - the presence of abundant food sources (including naturally occurring vegetation, unsecured garbage, intentional feeding, gardens/ornamental landscaping) and shelter in the Fire Island communities
 - habituation of deer to the unthreatening presence of humans and conditioning of deer, particularly to food sources, in the Fire Island communities and high-visitor use areas

At current levels, deer browsing in the Sunken Forest and other vegetated areas of the Seashore is reducing the abundance and diversity of native vegetation, including important understory species. In some areas, current levels of browsing appear to be creating conditions for an increase in undesirable species. The loss of native vegetation and overall change in the vegetation communities could result in impacts on other wildlife species, such as groundnesting birds and small mammals using these areas for food and shelter.

As a consequence of the habituation of deer to humans on Fire Island, deer no longer flee humans. Many are also conditioned to actively seek food provided by some residents of Fire Island communities or visitors to Fire Island. These artificial food sources include garbage, vegetable gardens, ornamental plantings, and corn (used as bait in 4-Poster Tickicide devices). This food conditioning and habituation to the presence of humans has led to behavioral changes in deer that add to various existing concerns for human health and safety, including direct

physical injury to Fire Island community residents and visitors, sanitation issues regarding deer scattering garbage, and the perceived role of deer in the incidence of Lyme disease. Other concerns include damage to ornamental plantings and vegetable gardens, interactions with pets, deer feeding on garbage, and injury to deer from fences.

Additionally, current levels of browsing by deer at the William Floyd Estate are resulting in the degradation of elements of the cultural landscape. The high concentration of deer at the William Floyd Estate also contributes to the perceived risk of tick-borne diseases, which may affect visitation at the site.

OBJECTIVES

For the plan/EIS, objectives have been established for the entire Seashore, and more specific objectives have been developed for the Sunken Forest, the Fire Island communities, and the William Floyd Estate. The objectives for deer and vegetation management at the Seashore have been developed to achieve certain conditions throughout the Seashore as a whole and to achieve certain resource conditions at specific areas within the Seashore, as described below.

- Manage a viable white-tailed deer population in the Seashore that is supportive of the other objectives for this plan/EIS.
- Promote natural regeneration of native vegetation.
- Protect special-status plant species/vegetation communities and their habitat from high levels of deer browsing.
- Work collaboratively with other land management agencies on issues associated with abundance, distribution, and behavior of white-tailed deer at the Seashore.
- Improve public understanding of the issues such as human-deer interactions, and the impact of white-tailed deer on the cultural and natural resources of the Seashore, and deer-tick relationships throughout the Seashore, including the William Floyd Estate.
- Continue to expand the knowledge base regarding the relationship between deer browsing and plant communities at Fire Island National Seashore to improve management decisions.
- Within the Sunken Forest, maintain the character of the globally rare maritime holly forest in perpetuity by creating conditions for the regeneration of key canopy constituent tree species and a reasonable representation (as defined in the desired conditions description) of herbs and shrubs that made up the Sunken Forest's vegetative composition when the Seashore was established.
- Reduce the potential for undesirable human-deer interactions both within the Fire Island communities and at other developed areas of the Seashore.
- Manage deer browse to allow for the restoration and preservation of the cultural landscape of the William Floyd Estate and for the regeneration of the forest within the lower acreage of the William Floyd Estate.