

Appendix A: Birds

Least Tern

Sternula antillarum

Federal Listing	N/A
State Listing	E
Global Rank	G4
State Rank	S1
Regional Status	Very High



Photo by Stacy Peterson

Justification (Reason for Concern in NH)

Least tern nesting colonies are sensitive to disturbance and as a result are declining in number in some areas of their range (NatureServe 2015). Although large colonies nest in Massachusetts and Maine, there is limited habitat in New Hampshire for colonies to form. Two pairs of least terns nested in New Hampshire in 2015, the first documented nesting in the state since the 1950's.

Distribution

Prior to documented nesting in 2015, least terns have been rare and non-breeding in the state since the 1950's. New Hampshire Audubon recorded 2 to 10 pairs nesting in Seabrook from 1953 to 1960. Although least terns are common in many parts of their range in North America, their preferred nesting habitat is also prime coastal real estate prone to development and human recreation (Thompson et al. 1997).

Habitat

Least terns use open beaches and vegetation-free islands for nesting. Although they may nest in areas with a substrate of larger stones, they prefer sand, shell, or gravel substrates high above the tide line. Like other terns, least terns tend to nest in colonies and are most productive at locations where colonies have been successful in previous years (Thompson et al. 1997). Unlike other terns, least terns tend to nest in areas attached to the mainland (Kress and Hall 2004).

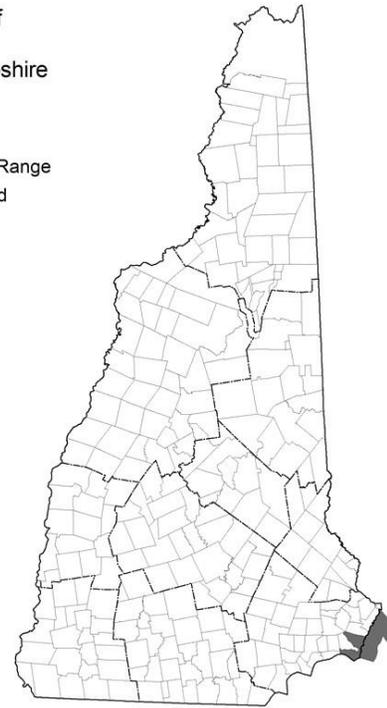
Appendix A: Birds

NH Wildlife Action Plan Habitats

- Dunes

Distribution of
Least Tern
in New Hampshire

■ Current Range
▨ Localized



Distribution Map

Current Species and Habitat Condition in New Hampshire

While several hundred pairs annually nest in Maine and several thousand in Massachusetts, nesting least terns had been absent from NH since the 1950's until nesting was documented in 2015.

Population Management Status

Least tern habitat overlaps with that of Piping Plovers and management strategies are similar. In NH, most potential least tern habitat is protected with symbolic fencing used for Piping Plovers. No specific management techniques have been used to protect nests (e.g., electric fencing).

Regulatory Protection (for explanations, see Appendix I)

- Endangered Species Conservation Act (RSA 212-A)
- Migratory Bird Treaty Act (1918)
- BCR or PIF priority species

Quality of Habitat

In New Hampshire there are only three known habitat patches that provide suitable nesting grounds for least terns. Each patch is subject to intensive recreational use during the breeding season and the high human densities have contributed to high predator densities.

Appendix A: Birds

Habitat Protection Status

All potential least tern breeding areas coincide with Piping Plover habitats that are protected under Federal Threatened and Endangered Species Laws. Coastal sand dune systems are protected under the Federal Coastal Zone Management Act (1972) and NH RSA 482-A pertaining to Fill and Dredge in Wetlands. Refer to the Dune habitat profile for more information.

Habitat Management Status

All potential least tern breeding areas coincide with Piping Plover breeding areas that are protected with symbolic fencing.

Threats to this Species or Habitat in NH

Threat rankings were calculated by groups of taxonomic or habitat experts using a multistep process (details in Chapter 4). Each threat was ranked for these factors: Spatial Extent, Severity, Immediacy, Certainty, and Reversibility (ability to address the threat). These combined scores produced one overall threat score. Only threats that received a "medium" or "high" score have accompanying text in this profile. Threats that have a low spatial extent, are unlikely to occur in the next ten years, or there is uncertainty in the data will be ranked lower due to these factors.

Mortality and disturbance from human recreation (walkers, OHRVs) (Threat Rank: High)

Nests that are established outside of fenced-off areas are difficult to detect and vulnerable to being crushed by vehicles. Soon after hatching, chicks are very mobile, moving between intertidal zones and dunes and along the length of beaches. This errant nature, combined with the chicks' inability to fly, leaves them particularly vulnerable to motorized vehicles.

No mortality of least tern chicks has been documented in NH. Beachgoers and vehicles have been documented as causing Piping Plover chick mortality in NH (which occupy the same habitat and are similarly vulnerable to people and vehicles).

Mortality from subsidized or introduced predators (Threat Rank: High)

The high human density surrounding the potential breeding areas in NH provides an attractive habitat for several potential predators. Foxes, striped skunks, crows, gulls, common grackles, and domestic dogs and domestic and feral cats have all been documented near potential breeding areas. Predators may cause adults to flush from nests and may prey on eggs, chicks or adults.

No evidence of nest or chick predation for least terns has been observed in NH. Predation of Piping Plover eggs, chicks and adults which breed in similar habitat has been documented.

Habitat conversion due to shoreline stabilization (Threat Rank: Medium)

Artificial dunes may not function in the same manner as natural dunes. They are often built as continuous ridges and may be too steep to serve as least tern nesting sites. Beach renourishment may create habitat in the short term but it may promote dune growth and increased vegetation reducing the long term suitability of nesting habitat.

Deposits from harbor dredging are placed on Hampton and Seabrook every 5-7 years. Although the specifications on the location and slope of the material are set forth by the USFWS to minimize impacts to Piping Plovers there is the potential for an overall reduction in habitat over the long term.

Appendix A: Birds

Mortality from increased storm intensity and frequency (Threat Rank: Medium)

Climate models predict an increase in the frequency and intensity of coastal storms. Inclement weather can disrupt bird migrations and make breeding and nesting sites inhospitable, forcing birds into marginal habitats. Least terns that nest along the foredune are vulnerable to tidal overwash from abnormally high tides.

The loss of least tern nests has not been documented from increasing storms. However, Piping Plover that occupy the same habitat have lost several nests to tidal overwash.

Habitat degradation from naturally increasing dune vegetation that reduces available nesting habitat (Threat Rank: Medium)

Least terns typically nest amongst sparse vegetation along gently sloping foredunes, blowouts, and sand spits. Increases in vegetation may reduce the habitat quality or eliminate potential nesting habitat.

The dunes at Hampton Beach State Park and Seabrook beach have grown substantially in height and width since the initiation of Piping Plover protection efforts in 1997 (Brendan Clifford, personal observation). With this growth and increases in dune vegetation the available nesting habitat has diminished for Piping Plovers and least terns.

List of Lower Ranking Threats:

Habitat conversion due to development

Actions to benefit this Species or Habitat in NH

Monitor Piping Plover breeding areas for the presence of least terns

Primary Threat Addressed: Mortality and disturbance from human recreation (walkers, OHRVs)

Specific Threat (IUCN Threat Levels): Human intrusions & disturbance

Objective:

Document and protect least tern nests

General Strategy:

Monitoring for the presence of least terns will be conducted during monitoring efforts for Piping Plovers. In the event a colony becomes established the appropriate nest-protection measures may be implemented (e.g., electric fencing, predator removal).

Political Location:

Rockingham County

Watershed Location:

Coastal Watershed

References, Data Sources and Authors

Data Sources

Information on least tern habitat, population distribution and status was collected from scientific literature, least tern management plans and New Hampshire Fish and Game data. Information on habitat protection and management was obtained from NHFG Piping Plover monitoring data.

Data Quality

Although least terns have been extensively studied throughout their breeding range, and although data regarding their biology and behavior is extensive, little is known about their demography and associations between wintering areas and breeding populations. Locally, the extent and quality of data on the distribution of the species is limited. Potential breeding areas for least terns overlap with that of Piping Plovers (which have been annually monitored since 1997)

2015 Authors:

Brendan Clifford, NHFG

2005 Authors:

Allison Briggaman, NHFG

Literature

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Thompson, B.C., J.A. Jackson, J. Burger, L.A. Hill, E.M. Kirsch, and J.L. Atwood. 1997. Least Tern (*Sterna antillarum*). In *The Birds of North America*, No. 290, A. Poole and F. Gill, editors. The Academy of Natural Sciences, Philadelphia, PA, and The American Ornithologists' Union, Washington, D.C.

United States Fish and Wildlife Service (USFWS), Office of Migratory Bird Management. 1987. Migratory nongame birds of management concern in the United States: the 1987 list.