

## Appendix A: Birds

### Vesper Sparrow

*Pooecetes gramineus*

Federal Listing	N/A
State Listing	SC
Global Rank	G5
State Rank	S2
Regional Status	Very High



Photo by Pamela Hunt

#### Justification (Reason for Concern in NH)

Populations of most grassland birds are in strong decline, both in the Northeast and sometimes across larger portions of their continental ranges. For this reason, most species were included in the Northeast list of SGCN, with those that occur regularly in NH retained for the NH WAP revision. Based on BBS data (Sauer et al. 2014), Vesper Sparrow populations in the Northeast have declined at 5.97% annually since 1966 (-3.77%/year from 2003-2013). Because of the species' overall rarity in the region, BBS data on smaller scales (e.g., NH) are less accurate, although the species also shows significant annual declines of 5.72% in BCR 14 and 4.29% in BCR 30. There have also been declines of 30-70% based on repeated Breeding Bird Atlases in the northeast (Cadman et al. 2007, McGowan and Corwin 2008, Renfrew 2013, MassAudubon 2014). Vesper Sparrows were never common in New Hampshire, but have declined since the 1960s and are now found primarily at a handful sites in the southern part of the state, plus the Ossipee Pine Barrens.

#### Distribution

Vesper Sparrows breed across the United States and Canada, from British Columbia and California east to the Maritime Provinces and Chesapeake Bay, and winter in Mexico and the southern United States (Jones and Cornely 2002). In New Hampshire, the species was formerly widespread in suitable habitat south of the White Mountains, with scattered records in southern Coos County (Foss 1994). Now it appears limited to the Ossipee Pine Barrens (where rare), the Keene and Pease airports, and scattered locations in the Merrimack Valley. In the latter it is known from the Manchester and Concord airports, and agricultural areas along the river from Concord, Canterbury, and Boscawen.

#### Habitat

The breeding habitat of the Vesper Sparrow consists of dry, open grassy areas with patches of bare ground and elevated perching areas. Such habitat includes old fields, crop and hayfields, and airports (Jones and Cornely 2002). Like most other grassland birds, this species is area sensitive. Vickery et al. (1994) found higher occupancy in fields greater than 20 hectares. In parts of New England Vesper Sparrows also use larger openings in pine barrens, especially if adjacent to larger expanses of grassland.

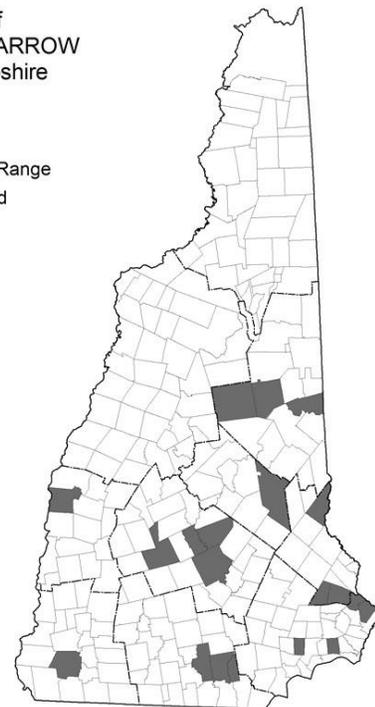
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### NH Wildlife Action Plan Habitats

- Grasslands
- Pine Barrens

Distribution of  
VESPER SPARROW  
in New Hampshire

■ Current Range  
▨ Localized



**Distribution Map**

### Current Species and Habitat Condition in New Hampshire

Limited data, but strongly declining on BBS, Breeding Bird Atlases, and in anecdotal accounts.

### Population Management Status

Management is not currently in place for this species.

### Regulatory Protection (for explanations, see Appendix I)

- Migratory Bird Treaty Act (1918)

### Quality of Habitat

No information

### Habitat Protection Status

Some agricultural sites in the Merrimack Valley have conservation status, as does most of the suitable habitat in the Ossipee Pine Barrens. Airport sites are not protected in the conventional sense.

### Habitat Management Status

Habitat management has not been implemented specifically for this species, although ongoing efforts

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directed towards habitats or other species is likely to benefit Vesper Sparrows. Included here is management of the Pease airfield for Upland Sandpipers and efforts to restore Pine Barrens in Concord and the Ossipee area.

### **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.*

#### **Habitat conversion and impacts from airport construction (Threat Rank: Medium)**

Expansion of runways or addition of new infrastructure (e.g., hangers) has the potential to remove suitable grassland habitat at the more important sites for this species in the state.

#### **Habitat conversion due to development and impacts from fragmentation (Threat Rank: Medium)**

Ongoing residential and commercial development results in permanent loss of habitats for wildlife. Because most Vesper Sparrow locations are in river valleys, they are proximal to urban areas and thus at risk for this threat. But in reality it is highly unlikely that development will impact this species in New Hampshire.

#### **Mortality and nest disturbance resulting from frequency and timing of mowing (Threat Rank: Medium)**

Mowing is generally considered the greatest threat to grassland birds because it either destroys nests outright or exposes them to greater predation risk. Frequency of mowing varies with location and land use. With respect to Vesper Sparrows, it is most frequent at airports, which are required to mow areas adjacent to runways and taxiways for safety reasons. At other sites, mowing is used primarily as a management tool to prevent succession (e.g., at landfills) or to maintain the open character of the site. Mowing for economic reasons (i.e., hay harvest) is not a significant threat at any of the sites currently used by Vesper Sparrows in New Hampshire.

#### **Habitat degradation and disturbance from airport runway maintenance (Threat Rank: Medium)**

This threat is separate from both mowing and construction, and pertains to human activity associated with existing infrastructure. Such activity includes paving, light installation, and other things that might result in vehicles and other equipment being parked off-runway in potential sparrow habitat.

#### **Habitat degradation due to fire suppression and associated succession (Threat Rank: Medium)**

In the absence of fire, pine barrens have fewer open areas and eventually become closed-canopy pine forests. Although Vesper Sparrows can persist in such areas for a time, densities are often lower than in more open portions of these habitats. See pine barrens habitat profile for more information.

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### **Habitat degradation and conversion from a lack of field maintenance and associated succession (Threat Rank: Medium)**

In the absence of periodic mowing, grassland sites revert to shrublands and eventually to forest. However, since most sites for Vesper Sparrows in New Hampshire are at airports, this is not in reality a significant threat to the species.

### **Habitat impacts from introduced or invasive plants (Threat Rank: Medium)**

Non-native plants are an increasing problem in grasslands elsewhere in the Northeast. Their impacts on grassland birds are poorly known, but could include reduced availability of nesting microhabitat (Scheiman et al. 2003), and/or altered insect communities. See the grassland habitat profile for more information.

### **List of Lower Ranking Threats:**

Habitat impacts and mortality from insecticide use

Habitat degradation and species disturbance from overgrazing of grassland habitat

Habitat conversion to cropland or sod (excluding hay)

## **Actions to benefit this Species or Habitat in NH**

### **Grassland bird monitoring**

#### **Objective:**

monitor trends for rare grassland birds in NH

#### **General Strategy:**

Periodic surveys of key areas for grassland birds (e.g., focal areas, see grasslands habitat profile) are needed to assess trends in distribution and abundance because broad-scale surveys like the BBS fail to capture these species in sufficient numbers. Surveys need not be annual, but should employ consistent methodology among years. See also the grassland and pine barrens habitat profiles for more detail on broad actions that may benefit Vesper Sparrows.

#### **Political Location:**

Statewide

#### **Watershed Location:**

Statewide

## **References, Data Sources and Authors**

### **Data Sources**

Trend data from Breeding Bird Survey (Sauer et al. 2014, above).

NH distribution data from NHBR/NH eBird

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### **Data Quality**

In the absence of systematic surveys, data on Vesper Sparrow distribution in New Hampshire is largely limited to anecdotal accounts from birders. As a result, there may be locations in the state where the species occurs but from which it has not been reported.

### **2015 Authors:**

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### **2005 Authors:**

Alina Pyzikiewicz, NHFG

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