



**Natural Heritage  
& Endangered Species  
Program**

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*Massachusetts Division of Fisheries & Wildlife*

**American Kestrel  
*Falco sparverius***

State Status: **None**

Federal Status: **None**

**SPECIES DESCRIPTION:** The American Kestrel, formerly known as the Sparrow Hawk, is North America's smallest and most widespread falcon, occurring from Alaska to Canada's Maritime Provinces, and south through Central America. It inhabits open areas where it hunts from perches or hovers above the landscape, focusing on arthropods and small mammals on the ground, and occasionally capturing insects and small birds on the wing. The American Kestrel is a secondary cavity nester that readily accepts artificial nest boxes.

**DISTRIBUTION AND ABUNDANCE:** The American Kestrel breeds in all regions of Massachusetts with open country, though specific breeding sites can be limited by suitable nesting cavities. The counties of eastern Massachusetts hold the state's highest Kestrel breeding densities, while the more heavily wooded Berkshire and Worcester Counties have the state's lowest densities.

Breeding Bird survey data shows that the population of the American Kestrel has experienced an overall decline of 0.5 percent annually from 1966 to 2002. Of the states with declines in Kestrels, Massachusetts ranks as having one of the sharpest declines during that timeframe, at 8.0 percent annually. As a whole, the southern New England states have experienced the most severe regional decline at an overall 10.7 percent annually. This late-20<sup>th</sup>-century decline follows the probable population surge of the 18<sup>th</sup> and 19<sup>th</sup> centuries when large areas of eastern North America were deforested for agricultural purposes.

**HABITAT DESCRIPTION:** The American Kestrel uses a variety of open to semi-open habitats, including meadows, grasslands, early old-field successional communities, open parkland, and agricultural fields, as well as both urban and suburban areas. Regardless of vegetative composition, breeding territories are

characterized by either large or small patches covered by short ground vegetation, with taller woody vegetation either sparsely interspersed upon the landscape or altogether absent. Suitable nest trees and perches are required for breeding territories, and with the introduction of nest boxes, previously unused but otherwise suitable habitat is now being occupied. Because of the relatively large territory size of the American Kestrel, there are few discrete sites that hold a significantly high percentage of the Massachusetts population.

**THREATS:** The lack of suitable nesting cavities appears to be a limiting factor for this species in Massachusetts. Additionally, an overall decrease in suitable open habitat due to development or forest succession has reduced the presence and breeding success of the species in the state. American Kestrel has also been proven sensitive to pesticides and other toxins, resulting in documented cases of reduced reproductive success and direct adult mortality.

Perhaps the easiest way to improve American Kestrel habitat is to continue the placement of nest boxes in suitable landscapes. To encourage this, kestrel nest box plans and a natural history/conservation fact sheet can be posted on the DFW website. Also, a flyer can be developed and distributed, similar to DFW wood duck flyers that explain the most suitable locations and habitats for placing nest boxes. Additionally, the use of ecological management techniques such as mechanical vegetation removal or prescribed fire to promote and maintain open habitats should be encouraged. The creation and maintenance of suitable open habitats through the Landowner Incentive Program is one strategy that may be effective. Where suitable habitat currently exists, efforts should be made to protect the landscape from development.

*A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan*

**Massachusetts Division of Fisheries & Wildlife**

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Please allow the Natural Heritage & Endangered Species Program to continue to conserve the biodiversity of Massachusetts with a contribution for 'endangered wildlife conservation' on your state income tax form, as these donations comprise a significant portion of our operating budget.

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**REFERENCES:**

- Sauer, J.R., J.E. Hines, and J. Fallon. 2004. *The North American Breeding Bird Survey, Results and Analysis 1966 - 2003*. Version 2004.1. USGS Patuxent Wildlife Research Center, Laurel, Maryland.
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